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# KuneAgi

A software to do things together

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## Functional specification

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**Action Proposal history**

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1	Creation	20-May-2008	Sergio Arbarviro
2	(1) Communication intra- and inter-WkGrp (2) PPP with positive objective (desirable goal) (3) Feedback by users (4) Systematic trace of process (5) Redaction guide: data source (6) Notifications to Moderator and CCPPP (7) Notification of sufficiently supported Action Proposal	1-Jun-2008	Sergio Arbarviro, after comments by F. Lefebvre-Naré and G. Misrahi
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# 1 Purpose of the document

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This document is the functional specification of the **KuneAgi software**.

## 1.1 Structure of the document

An introduction (chapter 2) gives an overview of the software's behaviour, as seen by the user. It is however not part of the specification itself, and should not be considered for coding.

The first part of the document (chap. 3 to 9) describes the software in a classical way, with the **data structures** and the main processes.

The second part (chap. 10 to 14) is written as a set of **usage scenarios**, in order to be usable as an input by Model Driven Engineering (MDE) techniques.

The last part (chap. 15 to 20) consists in additional documentation and recommendations that are useful for the actual implementation of the software in an operational environment.

This is a first version of the document, focusing on the core functions of the KuneAgi software, considered of priority level 4 "Essential" in [1]. The functions remaining to be specified are listed in chapter 15 below.

## 1.2 Purpose of the KuneAgi software

This software is the technical tool for the **collective definition** and the **ranking** in priority and quality order, by the Collective<sup>1</sup> made of its Members of **Action Proposals**. The software assures, through its internal procedures, that the word of every person will be earnestly taken into account at each of the steps of initiative, amendment and ranking of these Action Proposals. Each Action Proposal is the purpose of a written document, subject to an argued, structured and conclusive discussion among the Members.

The KuneAgi software answers the needs of human collectives when they are in the situation of "**doing things together**", of deciding "what should we do?" together.

**To do** something means to transform one's environment, society, humans, matter or information, at a specific moment in History, with the intention of improving or of repairing something.

For the action to be legitimate, the collective that engages in it must have mobilised all its resources to make sure that this action effectively contributes to reaching the claimed goal (technical validity of action) and that the interests, moral points of view and values of all relevant human and non-human (from plants and animals to the climate) stakeholders, current and future, were respected (moral legitimacy of action). By engaging in an action, by setting it in History, a collective is confronted to questions that find no answer in moral or scientific authority or in any form of universal truth, and that can only be solved through a thorough and well-argued **discussion** between the people involved:

- what are the priority objectives to reach, the most important problems and issues to solve?
- is the information available sufficient to act, or is it preferable to take time to gather more, or to let the situation evolve spontaneously, with the risk of letting the appropriate moment for action slip away?
- what will be the predictable consequences of the action, in the current state of

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<sup>1</sup> Some words of ordinary use are employed in the present document in a specific meaning, slightly distinct from the usual one. They are in this case written with an upper case initial, and their exact meaning is provided either along the document or in chapter 19.



knowledge, and what judgement should be held on them, knowing that these consequences bear upon different and heterogeneous areas, time scales and categories of stakeholders, which may not be boiled down to a single "optimisation" scale?

In a (formal or informal) **political organisation**, the KuneAgi Working Groups collectively produce Action Proposals that are:

- **Public Policy Proposals**, whose ranked list builds a **government programme**, at all scales of public policy, from the commune to the European Union
- **Electoral Programmes** of people aiming at being official candidates of the organisation in political elections.

A **Public Policy Proposal** is a **justified recommendation for action** that the Members of the Collective equipped with KuneAgi want a **public authority** to engage, at all scales (from the commune to the European Union). In other words, a Public Policy Proposal is the supported and justified answer given by the Members to the following question: "Facing this issue, act as if you were the public authority in charge. What would you do? Why?"

In general, a Public Policy Proposal addresses an identified issue, or aims at reaching a well-defined, desirable future state. The political project of the Collective, at all scales of public action, will be made of a set of such Public Policy Proposals, hierarchically ranked by the software procedures.

The KuneAgi software operating for a **private firm** will produce Action Proposals that are **Investment** (or disinvestment) **Proposals** (new products, new markets, new equipment, acquisition of capabilities or of immaterial services), including Problem Solving Proposals.

The Working Groups operating for an **association** or a **trade union** will produce Action Proposals that are Action Proposals for the association or the union, which are justified and ranked in the hierarchical order of a democratically validated working agenda.

The Working Groups operating for a **public authority** in charge of a territorial area (commune, county, region...) will produce Action Proposals that are Public Policy Proposals at the scale and within the area of responsibility of this public authority.

This production may be extended to other Action Proposals, that have the features of involving a human group, of being in the order of **action** (and not of truth): no external instance may decide of their validity, nor may answer any of the questions above. These extensions will be the purpose of further revisions of the present specification, using the provisions in § 4.3.3 (Action Proposal Category to be Produced) and in a possible extension of chapter 4.

The purpose of the KuneAgi software is to **generate** documents that be both **technically valid** and **legitimated** by the **agreement of peers**, in an open and transparent process, and then to **select** and **rank** them hierarchically in priority and quality order, while still assuring an **ideological coherence** of the programme being produced. The KuneAgi software contains **guarantees** against most known forms of power usurpation, concentration and confiscation, and against intrusion, nuisance and infiltration by malevolent third parties.

The general process is that each Action Proposal in an instance of the KuneAgi software (that is, in a specific Infrastructure, along the vocabulary described in § 19.2) generates the creation of an *ad hoc* **Working Group** whose legitimacy is guaranteed by the fact that the number of its Active Participants is sufficient. When the Working Group considers that its work is over, it publishes its result and submits it to the approval of the Collective's Members and dissolves (its Active Participants and Observers may then freely dedicate themselves to a new Action Proposal, together or separately). Distributed moderation procedures are set up upon initialisation of the Working Group and upon publication of its results, in order to assure the coherence of the Action Proposals with the general Principles of the Infrastructure.

The smooth operation of the Infrastructure requires that a text defining the Collective's Principles be defined before the start of the software's operations. The Collective's Principles is the *a priori* defined text that frames its work, such as (1) the ideological options and guiding principles of a political organisation, (2) the official purpose of an association or of a trade union, as described in its bylaws, (3) the corporate mission statement of a firm and (4) the domain of responsibility of a public authority. The Principles may later be amended following the procedures for an Electoral Programme.

KuneAgi's main features are:

- an unprecedented level of **internal democracy**, at the three key steps of initiative, amendment and ranking of proposals
  - the **innovativeness** of the action agenda being generated
  - the **quality** of the action agenda, in terms of technical validity, political legitimacy and coherence
  - the possibility to detect the **best contributors**, and therefore the new talents in the organisation.

For a detailed argument on these issues, please consider the KuneAgi website, at the following URL <http://www.kuneagi.org/english/fonctionscharacteristiquesen>.

The KuneAgi software distinguishes between Members, whose existence and uniqueness were controlled through an authentication process distributed among randomly selected Members, and the non-secure status of simple Follower. Any Member of the Infrastructure has access to its active functions of initiative, amendment and decision; any Follower to its functions of observation and comment. The Follower status creates an entry gateway for persons potentially interested, before they decide to become full Members.

## 2 Usage scenarios

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This chapter is a set of usage scenarios of the KuneAgi software. They illustrate in a concrete manner the functions and features present in the software, by taking the point of view of the two broad categories of users, the Members and the Followers. These usage scenarios are purely illustrative, and are no substitute for the functional specification itself written hereafter (in chapter 3 and following), and that is the only valid source for the technical development of the tool.

### 2.1 Usage scenarios for a Member

#### 2.1.1 Initial authentication

*(This function is **optional**, and is chosen upon the set-up of the Infrastructure).* The KuneAgi software assures that each Member is unique, with no risk of usurpation nor of multiplication of identities, that are detrimental to the responsibility for Members' actions and for the sincerity of votes. The procedure maintains the confidentiality of each Member's identity, since the nominative database remain unreachable, and because the Members performing the Distributed Authentication do not know the new Member's pseudonym during the Authentication procedure.

To that end, when an Internet user registers for the first time to the Infrastructure and requests to become a full Member, she<sup>2</sup> provides, in addition to her pseudonym and password, her given and family name and her date of birth. A small, odd number of correspondent Members, selected randomly and that do not know one another, then check her identity documents. The person is admitted as a new Member when the majority of these correspondents validate her identity.

#### 2.1.2 First contact: present oneself to the others

Upon her first entry into the Infrastructure, the new Member presents herself to the other Members and Followers of the Collective, by filling in the profile that she wants to show to others. This profile contains specifically the experience and competencies that she wants to share with the Collective and a photograph or a picture illustrative of her.

#### 2.1.3 Define one's Topics of Interest

Once her profile is defined, the new Member may define her thematic or geographic Topics of Interest, in the form of queries in the database of the Action Proposals.

The Member may keep her Topics of Interest stored, and will be informed as soon as a new Working Group is created or a new Action Proposal is published that fits with one of them.

#### 2.1.4 Integrate as an Active Participant in an existing Working Group

The new Member may ask to become an Active Participant in an existing Working Group. According to the option chosen by the Working Group to control its own composition, and according to whether the Working Group is or not beyond the maximal number of Active Participants, the Member immediately becomes an Active Participant of the Working Group or is placed in the Waiting List.

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<sup>2</sup>In all the document, when the female or male gender form is used, it applies indifferently to all persons, of male or female gender. This convention is used in order to preserve readability.

### **2.1.5 Start a Working Group by creating the Initial Version of an Action Proposal**

Any Member may freely initiate a new Action Proposal, on the topic of her choice, under the principle that "nobody owns a subject".

To do this, she may create a new Action Proposal, by providing some key elements of content and identification that allow in particular to find back the Action Proposal in the database by looking for specific Topics of Interest. She may also start from an existing Action Proposal, for which she considers, under her responsibility, that the existing Working Group is not appropriate, and for which she will attempt to create a new Working Group<sup>3</sup>.

Upon the creation of a Working Group, and afterwards during its life, its Active Participants may freely choose its operating rules, its composition control mode, and its collective decision mode, in order to fine-tune its degree of openness or of control.

After validation by a Distributed Moderation, shared between several other randomly selected Members, and whose decision bears on formal issues, and specifically on the respect of people and of law, the new Action Proposal is integrated into the database. The Members for whom one of their Topics of Interest corresponds to this Action Proposal are informed of its existence and are invited to participate in the Working Group.

### **2.1.6 Act as an Active Participant in the Working Group**

Once she becomes an Active Participant of the Working Group (and under the condition that this Working Group have a sufficient number of Active Participants to be considered as legitimate and to start being Active), the Member may contribute to the Action Proposal, in the form of Amendment proposals. On each Amendment, a discussion may take place, during which arguments for or against this Amendment are exchanged. After a duration managed by the Active Participants of the Working Group themselves, the Working Group considers that the exchange of argument has been long enough, and it switches to a decision-making mode: for each Amendment being proposed, the Working Group decides to adopt or to reject it (according to the Collective Decision mode chosen by the Working Group itself). It also decides whether the new version of the Action Proposal, following these adopted Amendments, deserves being retained (which starts a new cycle of Amendments) or rather relinquished (which causes the Working Group to halt and to dissolve).

During the activity of the Working Group, its Active Participants may freely exchange e-mails, meet physically, etc... and keep these contacts for further joint actions in the physical world.

The process is then repeated until convergence towards a version considered worth being published by the Working Group (the fact of publishing an Action Proposal is the purpose of a specific decision by the Working Group, and marks its end).

In order for a Member to keep her position of Active Participant in a Working Group, she must contribute to it at regular intervals. If she is inactive for a certain duration (defined in advance), and after a warning message sent with a reasonable delay, she is expelled from the Working Group. She must, if she wants to integrate it back, follow again the entry procedure that is defined by the composition control mode of the Working Group.

If a Working Group does not manage to converge towards a new version of its Action Proposal at regular intervals and after a warning message sent with a reasonable delay, it is considered that the Working Group is fruitless. Its activity is stopped and the Working Group is dissolved.

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<sup>3</sup> This new Working Group will however, in order for its Action Proposal not to be considered as a simple plagiarism of the earlier one, bring in new elements and cite among its sources the earlier Action Proposal and the list of its contributors. A Controller for the Prevention of Plagiarism has the duty to prevent these unfair behaviours. In essence, the general rule is that the Action Proposals produced by the Infrastructure follow the Creative Commons "Attribution – No Commercial Use – Share Alike" licence of the relevant jurisdiction (see § 3.5).

In all cases described above where the Working Group is dissolved, it may be reactivated simply and rapidly around an identical or renovated group of Members, by re-starting the procedure described in § 2.1.5.

### **2.1.7 Follow the activity of a Working Group as an Observer**

A Member may elect to participate in a Working Group as a simple Observer.

The Observer of a Working Group has a read-only access to the Action Proposal under production and to the Amendments. She may write arguments and bring information to the Working Group, whose Active Participants freely choose to consider or not. She is informed of the writing of new Amendments or of the adoption of a new version of the Action Proposal.

### **2.1.8 Evaluate the work quality of peers in the Working Group**

At the end of the presence of a Member as Active Participant in a Working Group (be it because the activity of the Working Group ceases, or because the Member leaves it, willingly or not), she has the possibility to evaluate the work quality of the other Active Participants in the Working Group, and reciprocally these may express one on her.

This evaluation bears upon (1) the technical quality of contributions, and (2) on the cooperative behaviour. The addition of all evaluations made by other Members is an element of the profile of each Member, and may be read by all. It is a form of internal reputation and of mutual control on the behaviour of Members.

### **2.1.9 Support a published Action Proposal**

Once a Working Group has decided to publish its Action Proposal, and after validation of its compliance with the Principles of the Collective, by a Distributed Control procedure, all Members are informed of its existence by a message.

Each Member has the possibility, at this moment or later to provide her Support to an Action Proposal published by a Working Group.

In the case of Public Policy Proposals or of Investment Proposals, this Support takes the form of a Token. With this Support Token, the Member expresses either that she considers the issue as being important (even if the solution being proposed is insufficient), or that the issue is important and that this Action Proposal proposes a high-quality solution.

She may also and freely take away her Support Token from a Public Policy Proposal, because she changed her mind, because she considers that another Proposal addresses the issue better or because she considers that another issue, that was the purpose of another Proposal, is of higher priority.

Each Member only has a small, finite stock of Support Tokens to allocate: she must therefore manage it with care.

In the case of an Electoral Programme or of a Public Declaration, the support takes the form of a Schulze Ballot. The Schulze method is used when several Action Proposals compete simultaneously for a single winner position. The Schulze Ballot is the list of competing Action Proposals, ranked in preference order by the Member.

### **2.1.10 Identify the best contributors to co-operative work**

Each Member may list those Members having the best appreciation marks in general, or by selecting according to thematic or geographic areas. For each Member in this list, she, may look at the Action Proposals to which she contributed, the dates when she was present as an Active Participant in the Working Group having produced this Action Proposal., and to the number of Support Tokens that this Action Proposal received. Everyone may then evaluate the quality of the contribution of these Members, and identify the best contributors.

### **2.1.11 Propose improvements to the KuneAgi software**

The KuneAgi software is a highly innovative tool, addressing new needs and aiming at embodying new modes of elaboration of political documents. Therefore, it is susceptible to improvements, and needs the feedback by users to converge towards a status satisfying the largest numbers.

The Member may signal bugs to the managers of the KuneAgi software or request functional improvements, using a dedicated form.

## **2.2 Usage scenarios for a Follower**

The usage scenarios accessible for a Follower are inherited from those valid for a Member, and are the following:

- Authentication (cf. §2.1.1), where the identity and the uniqueness of the Follower are not controlled
- Present oneself to the others (cf. §2.1.2), without modification
- Define one's Topics of Interest (cf. §2.1.3), where the Follower cannot become an Active Participant in a Working Group
- Follow the activity of a Working Group as an Observer (cf. §2.1.7), without modification
- Propose improvements to the KuneAgi software (cf. §2.1.10), without modification.

## 3 General specifications

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### 3.1 Development versions

The KuneAgi software exists in two successive versions:

- in version 1:
  - the KuneAgi software manages a number of people (total of Members and Followers) inferior or equal to 3 000 and a number of Working Groups (and therefore a number of Action Proposals) inferior or equal to 300
  - the KuneAgi software manages only the following Action Proposal Categories: Public Policy Proposals, Investment Proposals
  - the list of Action Scales (§ 4.5.2), of Geographic Locations (§ 4.5.3) and of Public Policy Domains (§ 4.5.5) is the one valid for the first country where the KuneAgi software will be implemented, as a Member of the European Union
  - the Numeric Constants defined in § 18 are fixed, and are defined by the administrator upon installation
- in version 2:
  - the number of Members, Follower, Working Groups and ActProp is not limited
  - all Action Proposal Categories are managed
  - the list of Action Scales (§ 4.5.2), Geographic Locations (§ 4.5.3) and Public Policy Domains (§ 4.5.5) is valid for the other Member States of the European Union, and for other States whose citizens have shown interest for KuneAgi
  - each Member has the right, at any time, to modify the value that she wishes for each of the Numeric Constants of § 18. The default value for her wish is the one provided in the table of § 18. The value being used by the KuneAgi software for each Numeric Constant at any time is the **median** value of the wishes expressed by the Members, using the Screen S95 of § 8.2.9.

### 3.2 Test instruments

In order to test the functions of the KuneAgi software that are time-dependent, the test version of the software contains a separate tool to manually define the Current Date. This tool is absent of the production version of the KuneAgi software.

### 3.3 General security

The following interactions between the user and the Infrastructure are made using the **Transport Layer Security (TLS)** protocol:

- login (described in § 8.2.1)
- Registration for Members, Natural Persons and Followers (described in § 8.2.1)
- Authenticated Vote (described in § 3.4.4)
- Authenticated Resignation (described in § 3.4.5).

The part of the software that is specific to KuneAgi, on top of existing software packages, will be programmed following **secure programming** guidelines:

- for Python, the guidelines are those proposed by the Python Security group<sup>4</sup>
- for Django, they are those proposed in the Chapter 20 of the "Django book"<sup>5</sup> and those

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<sup>4</sup><http://www.pythonsecurity.org/>

<sup>5</sup><http://www.djangobook.com/en/2.0/chapter20/>

specific to Django<sup>6</sup> proposed by the Python Security group

- for PHP: the guidelines are those defined by the PHP Security Consortium<sup>7</sup>
- for MySQL : the guidelines are those of the MySQL Reference Manual<sup>8</sup>.

The user interface forbids the user from entering any HTML or PHP code in any of the text fields.

### 3.4 Authenticated Messaging

The following texts are authenticated using an Asymmetrical Encryption scheme:

- Authenticated Internal messages (§ 3.4.2) sent by the Infrastructure to a Member
- Authenticated e-mails (§ 3.4.3) sent by by the Infrastructure to a Natural Person
- Authenticated Votes (§ 3.4.4) performed by the Member
- Authenticated Resignations (§ 3.4.5) by the Member or the Natural Person.

#### 3.4.1 Chosen algorithms

The Asymmetrical Encryption scheme uses the following algorithms:

- hash coding using **SHA-1**<sup>9</sup> hash function
- encryption using the Public-Key Cryptography Standards (PKCS) #1: **RSA** Cryptography Specifications Version 2.1<sup>10</sup>.

#### 3.4.2 Authenticated Internal Messages

In the present specification, an "Authenticated Internal Message" is an Internal Message (i.e. not a standard e-mail), sent to a Member by the Infrastructure in order to be displayed upon request on the Member's screen when her session is active, and containing:

- the Message Informative Content, described hereafter in several sections of chapter 4 of the present specification, and that is different for each category of message
- the Current Date, legal date when the message was sent by the Infrastructure
- a reminder of the Infrastructure's Public Key
- the Encrypted Digest, i.e. a hash code of the Message Informative Content and of the Current Date, encrypted using the Infrastructure's Private Key
- a link to download the Message Informative Content and the Encrypted Digest as a plain text file.

In this way, any message received by a Member from the Infrastructure may be proven to be authentic, and the Member may keep a trusted record of the information received: even if the information stored on the Infrastructure were changed afterwards by a technical administrator (which would be possible because he holds the Infrastructure's Private Key), the version kept by the Member would be considered as more authentic in case of conflict between the versions held by the Infrastructure and by the Member, because the Member has no means to change the

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<sup>6</sup><http://www.pythonsecurity.org/wiki/django/>

<sup>7</sup><http://phpsec.org/>

<sup>8</sup>available for the version 5.5 of MySQL <http://dev.mysql.com/doc/refman/5.5/en/privilege-system.html>

<sup>9</sup><http://tools.ietf.org/html/rfc3174>

<sup>10</sup><http://tools.ietf.org/html/rfc3447>



data and keep the Encrypted Digest coherent with the Message Informative Content and the Current Date.

### 3.4.3 Authenticated E-mails

In the present specification, an "Authenticated E-Mail" is a plain text e-mail, sent to a Natural Person by the Infrastructure and containing:

- the E-Mail Informative Content, described hereafter in several sections of chapter 4 of the present specification, and that is different for each category of e-mail
- the Current Date, legal date when the e-mail was sent by the Infrastructure
- a reminder of the Infrastructure's Public Key
- the Encrypted Digest, i.e. a hash code of the E-Mail Informative Content and of the Current Date, encrypted using the Infrastructure's Private Key.

### 3.4.4 Authenticated Vote

In the present specification, an "Authenticated Vote" is a secure, encrypted transaction between the Member's or the Natural Person's session of her computer and the Infrastructure, during which information is sent by the Member or the Natural Person to the Infrastructure. It contains:

- the Vote Informative Content, described hereafter in several sections of chapter 4 of the present specification, and that is different for each category of Vote
- the Current Date, legal date when the vote was registered by the Infrastructure
- the Member's or the Natural Person's Public Key
- the Encrypted Digest, i.e. a hash code of the Vote Informative Content and of the Current Date, encrypted using the Member's or the Natural Person's Private Key.

All this information is stored by the Infrastructure and kept as a trace of the transaction.

The Member's or the Natural Person's Vote Informative Content is taken into account by the Infrastructure in a Distributed Authentication (§ 5.1), a Collective Decision (§ 7.7), a Distributed Moderation or Control of Compliance with Principles and Plagiarism Prevention (§ 7.3) only if the Authentication Check is successful. The Authentication Check succeeds if the Encrypted Digest decoded using the Member's or the Natural Persons' Public Key matches with the hash code of the (Vote Informative Content; Current Date) couple.

If the Authentication Check fails, the Infrastructure immediately displays an error message.

If the Vote is taken into account by the Infrastructure following the successful Authentication Check described above, the Member or the Natural Person is considered as having participated in the Collective Decision, the Distributed Authentication, the Distributed Moderation or the Control of Compliance with Principles and Plagiarism Prevention, and may not attempt again to perform this Authenticated Vote. If on the other hand the Authentication Check failed, the Member or the Natural Person may again attempt to perform the Authenticated Vote.

### 3.4.5 Authenticated Resignation

In the present specification, an "Authenticated Resignation" is a secure, encrypted transaction between the Member's or the Natural Person's session of her computer and the Infrastructure, during which information is sent by the Member or the Natural Person to the Infrastructure. It contains:

- the Resignation Informative Content, i.e. a text of resignation, the position from which the Member resigns (as a Member of the Infrastructure, as an Active Participant or from

a Waiting List in a Working Group), the Working Group from which he resigns as an Active Participant or from the Waiting List and the Member's Pseudonym or the Natural Person's Family Name and Given Name, respectively

- the Current Date, legal date when the resignation was registered by the Infrastructure
- the Member's or the Natural Person's Public Key, respectively
- the Encrypted Digest, i.e. a hash code of the Resignation Informative Content and of the Current Date, encrypted using the Member's or the Natural Person's Private Key, respectively.

All this information is stored by the Infrastructure and kept as a trace of the transaction.

The Member's or the Natural Person's Resignation Informative Content is taken into account by the Infrastructure (and the Member removed from the Infrastructure, from the Active Participants or the Waiting List of the Working Group; or the Natural Person changes its State to A9 as per § 5.1.3) only if the Authentication Check Described in § 3.4.4 succeeds. If this Authentication Check fails, no action is taken by the Infrastructure.

### 3.5 "*Libre*" authors' rights, following "Creative Commons" rules

The Action Proposals produced by the Infrastructure follow the "*libre*" author rights regime defined in the "Attribution-Non Commercial-Share Alike 2.0 France" licence of *Creative Commons*, of which the summary<sup>11</sup> stipulates that any person:

- is free:
  - to Share — to copy, distribute and transmit the work
  - to Remix — to adapt the work
- Under the following conditions:
  - Attribution — You must attribute the work in the manner specified by the author or licensor (but not in any way that suggests that they endorse you or your use of the work).
  - Non-commercial — You may not use this work for commercial purposes.
  - Share Alike — If you alter, transform, or build upon this work, you may distribute the resulting work only under the same or similar license to this one.

The complete version of the licensing contract is available here:

<http://creativecommons.org/licenses/by-nc-sa/2.0/fr/legalcode>.

### 3.6 Provision for a multilingual Human-Machine Interface

In the perspective of evolution towards a tool being used internationally, and specifically in an European context, provisions are taken so that the Human-Machine Interface of the KuneAgi software be adapted to **other languages** than the one used for its first implementation, provided they use a Latin or Cyrillic alphabet.

### 3.7 Provision for other Action Proposal Categories

The architecture of the KuneAgi software contains provisions to adapt to the production of other Action Proposals than the Action Proposal Categories described in § 4.3.3. These other Action Proposals would share with the already defined Action Proposal Categories the need for an open exchange of arguments and information, and of a political and democratic decision, with no possibility of external, neutral judge, as it is the case in all generic situations where an action agenda must be collectively decided.

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<sup>11</sup> <http://creativecommons.org/licenses/by-nc-sa/2.0/fr/>

### 3.8 Free, Libre and Open Source Software (FLOSS) regime

The KuneAgi software is written as a **Free, Libre and Open Source Software (FLOSS)**, following the **GNU – Affero GPL v.3** licence<sup>12</sup>.

### 3.9 Simplicity of the Human-Machine Interface

In a perspective to facilitate access to the KuneAgi software for old computers, with limited computing and memory resources, and to Members having a slow Internet access (typically in rural areas), the Human-Machine Interface preferably generates simple HTML pages, with a reduced number of Java applets and of Macromedia Flash-type animations.

### 3.10 Installation

The **installation** of any Infrastructure should follow **security guidelines** for the operating system of the server, such as those developed by the National Security Agency of the United States of America<sup>13</sup> for Linux- Red Hat and for MySQL databases<sup>14</sup>.

For each instance of the KuneAgi software (i.e. for each new Infrastructure being set up), the following data are defined upon installation:

- list of Action Proposal Categories managed by the Infrastructure among the list given in § 4.3.3
- list of Action Scales (§ 4.5.2), of Geographic Locations (§ 4.5.3), of Election Categories (§ 4.5.4) and of Public Policy Domains (§ 4.5.5) among which choice is offered to the Members for them to index their Public Policy Proposals, in order to adapt to the needs of different Collectives in States or political Unions (such as the European Union), or to the needs of specific territorial public authorities. This list is pre-filled for States or political Unions for which an Infrastructure was already set up, and the role of the administrator upon initialisation consists in selecting the relevant elements for her instance of the KuneAgi software, and to add manually the elements missing in the list.
- list of Investment Categories (§ 4.7.2), the hierarchy of Geographic Action Scales (§ 4.7.3), the list of names of Geographic Locations, of geographic units of rank 2 to 5 (§ 4.7.4), of Functional Action Scales (§ 4.7.5), the lists of Functional Domains, functional units of rank 2 to 5 (§ 4.7.5), of Operational Action Scales (§ 4.7.7), and of Operational Domains, operational units of rank 2 to 5 (§ 4.7.8), of the firm or of the organisation, among which choice is offered to the Members for them to index their Investment Proposals.
- *DistribAuthent* variable that describes whether the Distributed Authentication procedure described in § 5.1 is implemented
- Key pair for the Asymmetrical Encryption to be used by the Infrastructure, the Public Key and the Private Key.

### 3.11 Pre-requisites

In order to operate properly, the Infrastructure relies on two texts defined **before** the start of operations:

- **Moderation rules**, bearing specifically on formal issues and on the compliance with legal and of courtesy rules

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<sup>12</sup>available at <http://www.gnu.org/licenses/agpl-3.0.html>

<sup>13</sup>Available at [http://www.nsa.gov/ia/guidance/security\\_configuration\\_guides/operating\\_systems.shtml](http://www.nsa.gov/ia/guidance/security_configuration_guides/operating_systems.shtml)

<sup>14</sup>available for the version 5.5 of MySQL at <http://dev.mysql.com/doc/refman/5.5/en/security.html>

- a set of **Principles**, defining the framework of the Action Proposals being generated by the Infrastructure. The Principles of the Collective is the *a priori* defined text that frames its work, such as (1) the ideological options and guiding principles of a political organisation, (2) the official purpose of an association or of an union, as described in its bylaws, (3) the corporate mission statement of a firm and (4) the domain of responsibility of a public authority. These Principles are therefore a founding text, in which Members recognise themselves, and that give coherence to the Action Proposals produced by the Infrastructure.

These rules are not embedded in the software, but the control of the compliance of Action Proposals produced by the Infrastructure with these texts is the purpose of Distributed Moderation and Control procedures included in the production process of Action Proposals (§ 7).

## 4 Architecture of objects building the KuneAgi software

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The KuneAgi software contains common objects and objects specific to each Action Proposal Category susceptible to be produced.

The present document exposes, in addition to the common objects, the objects specific to the elaboration of the first Action Proposal Categories being considered, and that are listed in § 4.3.3.

For each object category, the document describes the list of objects and then, for each of them, the corresponding data structure.

### 4.1 Code defining the Reading, Writing and Modification rights

By analogy with Unix rights, the present document defines a code with 15 letters, in 5 groups of 3 letters separated by dots, defining the Reading, Writing, and Modification rights on the object's components, called FMOGI Code<sup>15</sup> (**F**ollowers, **M**embers, **O**bservers, **W**orking **G**roup, **I**ndividual). The five letters FMOGI relate more precisely respectively to:

- all **Followers**. The Followers are those persons whose existence and uniqueness were not checked, and that registered directly on the Infrastructure, with no validation by the secure Distributed Authentication procedure (see § 5.1);
- all **Members** of the Collective. The Members are the natural persons whose existence and uniqueness were checked and validated by the Distributed Authentication procedure described in § 5.1( = a single natural person may not use several identities, pseudonyms or avatars). The Natural Person associated with the Member is therefore in the State A1 defined in § 5.1.1;
- the **Observers** of the Working Group where the Individual is an Active Participant or an Observer;
- the Active Participants of the **Working Group** where the Individual is an Active Participant or an Observer;
- the **Individual** herself.

The rights of each category are coded by a group of three letters, as follows:

- Reading, coded R
- Writing, coded W. The Writing right ("W") refers to the first time when the object component is written. Once written a first time the object component may only be modified if the person has the Modification right ("M").
- Modification, coded M, when the component may freely be modified by the owner of the right (after it was written the first time using the Writing right). When the owner of the Modification right are all the Active Participants of the Working Group (part "G" of the FMOGI code), the right is coded as C (for "using Collective Decision"): in this case, the component may only be modified after a **Collective Decision** by the Active Participants of the Working Group, as described in §4.2.4.

The absence of right is indicated by a dash "-".

It is sufficient for an individual to have a right due to one of her roles to be entitled to use it. If for example all Members have a Reading right ("R") on an element of data, this means that if the individual being considered is a Member, she will be allowed to read it. On the other hand,

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<sup>15</sup> The list of acronyms being used in the present document with a reminder of their meaning is given hereafter in §19.1.

if she is a simple Follower, she will only be allowed to do so if the FMOGI code explicitly specifies so.

All elements of information for which the FMOGI code is (FMOGI = R--R--....----) or (FMOGI = ---R--....----) are automatically generated by the KuneAgi software, using the information that it has available, such as the identity of the Member or of the Follower connected during the current session, the current date-time, etc.

Examples : An element of data whose FMOGI code is:

- FMOGI = ---R--....---- is accessible, and only in Reading, only to the Members of the Collective
- FMOGI = ---R--....----R-- may be read by any Member of the Infrastructure and may be read by the individual concerned, even if she is a simple Follower
- FMOGI = R--R--.-W--WM.-WM may be read by any Follower and any Member of the Infrastructure; may be written once by any Observer of the Working Group of which the Individual is an Active Participant (or an Observer) and may be written and modified by the Active Participants of the Working Group of which the Individual is an Active Participant (or an Observer) and by the Individual herself. Since the Reading right ("R") is open to any Member or Follower, it is not repeated in the rest of the FMOGI code
- FMOGI = ---....R--R--.-WM may be read by the Active Participants and the Observers of the Working Group of which the Individual is an Active Participant (or an Observer) and may be written and freely modified by the Individual herself. Since the Individual is also an Active Participant or an Observer of its Working Group, one does not repeat that she has a Reading right ("R")
- FMOGI = ---R--R--.-WC.-W- may be read by any Member of the Infrastructure and by any Observer in Working Group of which the Individual is an Active Participant (or an Observer), it may be written a first time by the Active Participants of the Working Group and by the Individual herself, but may afterwards only be modified following a Collective Decision by the Working Group. The Reading right ("R") of the Active Participants in the Working Group is not repeated in the rest of the FMOGI code, because all the Active Participants are also Members. The Writing right ("W") is repeated for the Individual: this means that the Individual has right, even if she is not an Active Participant of the Working Group
- FMOGI = ---....----RW- may be read and written once by the Individual only, but without being modified later.

For Natural Persons, the Reading, Writing and Modification rights are described with a simpler AI Code (for all Authenticated Natural Persons and Individual), of 4 letters, the first one being separated by a dot from the other three:

- the first letter refers to a Reading right for all Authenticated Natural Persons, that is, to all Natural Persons in the State A1 of § 5.1.1. This Reading Right is given to a Natural Person other than the Individual himself if this Natural Person provides the Family Name and Given Name of the Individual: it is there to allow any Authenticated Natural Person to check the status of another person claiming that she is indeed also a participant in the Collective
- the Read, Write and Modify rights for the Individual himself.

The principles for the definition of the AI Code are identical to those of the FMOGI Code.

## 4.2 Objects relating to Working Groups, Members, Natural Persons and Followers

The objects relating to Working Groups, Members and Followers are the following:

- the Follower, described in § 4.2.1
- the Natural Person, described in § 4.2.2
- the Member, described in § 4.2.3
- the Invitation to Justify one's Identity (InvitJustifIdent), described in § 4.2.4
- the Invitation to Authenticate (InvitAuthent), described in § 4.2.5
- the Acknowledgement of Vote in a Distributed Authentication (AckVoteDistrAuth), described in § 4.2.6
- the Welcome Notification for a Natural Person (WelcomeNoteNatPers), described in § 4.2.7
- the Notification of Authentication Refusal (NoteAuthRef), described in § 4.2.8
- the Welcome Notification for a Member (WelcomeNoteMember), described in § 4.2.9
- the Welcome Notification for a Follower (WelcomeNoteFollower), described in § 4.2.10
- the Acknowledgement of Resignation for a Member (AckResignMember), described in § 4.2.11
- the Acknowledgement of Resignation for a Follower (AckResignFollower), described in § 4.2.12
- the Acknowledgement of Resignation for a Natural Person (AckResignNatPers), described in § 4.2.13
- the Erasure Notification (EraseNote), described in § 4.2.15
- the Collective Decision (CollDec), described in § 4.2.16
- the Working Group (WkGrp), described in § 4.2.17
- the Vote Start Notification (VoteStartNote), described in § 4.2.18
- the Acknowledgement of Vote in a Collective Decision (AckVoteCollDec), described in § 4.2.19
- the Vote Result Notification (VoteResuNote) described in § 4.2.20
- the Notification of Acceptance as an Active Participant in the Working Group (NoteAccept), described in § 4.2.21
- the Notification of Refusal as an Active Participant in the Working Group (NoteRefusal), described in § 4.2.22
- the Notification of Acceptance on the Waiting List of the WkGrp (NoteAcceptWkGrp), described in § 4.2.23
- the Acknowledgement of the Member or of the Follower as an Observer in the Working Group (AckObserverIn), described in § 4.2.24
- the Notification of Active Working Group (NoteActWkGrp), described in § 4.2.25
- the Warning for Inactive Member in the Working Group (WarnInactMemb), described

in § 4.2.26

- the Warning for Inactive Working Group (WarnInactWkGrp), described in § 4.2.27
- the Warning for Fruitless Working Group (WarnFruitlessWkGrp), described in § 4.2.28
- the Notification of an Inactive Working Group (NoteInactWkGrp), described in § 4.2.29
- the Acknowledgement of Resignation for an Active Participant (AckResignActPart), described in § 4.2.30
- the Acknowledgement of Resignation for an Observer (AckObserverOut), described in § 4.2.31
- the Acknowledgement of Resignation from the Waiting List (AckResignWaitList), described in § 4.2.32
- the Notification of Eviction of a Member out of a Working Group (NoteEvict), described in § 4.2.33
- the Notification of placement of a Member or a Follower on the Black List of a Working Group (NoteBlackList), described in § 4.2.34
- the Invitation to Evaluate (InvitEval), described in § 4.2.35
- the Distributed White Pages Update, described in § 4.2.36.

#### 4.2.1 Data structure of the Follower

A Follower is defined by:

- a Pseudonym (FMOGI = R--R--....-W-), chosen by the Follower at the moment of her registration This pseudonym is used to represent the Follower in the Infrastructure, specifically to sign her Contributions. This Pseudonym is unique in the whole Infrastructure: a given Pseudonym may be used only once at a given time. In the whole KuneAgi software, when the pseudonym of a Follower appears on a screen, a hypertext link leads to her full profile, as defined in the present paragraph (§ 4.2.1) and (if the person is also a Member) in § 4.2.3, while respecting the rights defined by the FMOGI code of each component. Another hypertext link opens the window to write her an Internal Message. Writing Internal Messages is open to all Followers and to all Members in the Infrastructure.
- a personal access code (FMOGI = -----.RWM) or "password", chosen by the Follower at the moment of her registration
- the date of her registration in the Infrastructure (FMOGI = R--R--....-)
- the presentation text of her experience and competencies that she wishes the Collective to benefit from (FMOGI = R--R--....-WM)
- a photograph or picture illustrative of herself (FMOGI = R--R--....-WM)
- the link towards a video illustrative of herself, hosted on a third-party site that broadcasts on-line videos (FMOGI = R--R--....-WM)
- her Black List for electronic messages (FMOGI = -----.RWM), i.e. the list of Followers and Members that may not send her electronic messages. The Black List is initially empty.
- her country of residence (FMOGI = R--R--....-WM)
- her administrative unit of level NUTS-1 (in Germany: the *Bundesland*, in France the











- the list of all Substantial Amendments performed since her registration in the Infrastructure (FMOGI = ---.R---.---.---.---)
- the total number of ActProp of which she wrote the Initial Version since her registration in the Infrastructure (FMOGI = ---.R---.---.---.---)
- the list of all ActProp of which she wrote the Initial Version since her registration in the Infrastructure (FMOGI = ---.R---.---.---.---)
- the values that the Member wishes for each of the Numeric Constants described in chapter 18 (FMOGI = ---.R---.---.---.---.---WM)
- the dates of the last *NbMaxDownload* occasions when she downloaded an Action Proposal (ActProp).

#### 4.2.4 Data structure of the Invitation to Justify one's Identity (InvitJustifIdent)

The Invitation to Justify one's Identity (InvitJustifIdent) is an Authenticated E-Mail sent to the new Member (= in the State A0 defined in § 5.1.1). The InvitJustifIdent is automatically generated by the KuneAgi software, and contains:

- a text explaining the Distributed Authentication procedure
- the real e-mail addresses of the *NbDistribAuth* Natural Persons (in the State A1 defined in § 5.1.1) in charge of his Distributed Authentication, and to which he is invited to send, in *NbDistribAuth* separate e-mails, with Acknowledgement of Receipt, a high-resolution scanned image of the official identity document that he chooses to use
- the value of *TAuthent* at the start of the Authentication procedure
- the date when the Authentication procedure will be closed, equal to (Current Date + *TAuthent*), and before which the Authenticating Natural Persons must have received this scanned image.

#### 4.2.5 Data structure of the Invitation to Authenticate (InvitAuthent)

The Invitation to Authenticate (InvitAuthent) is an Authenticated E-Mail sent to the *NbDistribAuth* Natural Persons in charge of the Distributed Authentication of a new Natural Person. The InvitAuthent is automatically generated by the KuneAgi software, and contains:

- a text reminding of the Distributed Authentication procedure and of the list of Official Positions in the organisation that entitle the right to be an Implementer
- the data required for Distributed Authentication (described in § 5.1.2) of the new Natural Person (= in the State A0 defined in § 5.1.1), waiting for the Distributed Authentication
- the link to the Distributed Authentication screen (described in § 8.3.1) for this couple (Authenticating Natural Person; new Natural Person)
- the values of *TAuthent* and of *TDecAuthent* at the start of the Authentication procedure
- the date when the Authentication procedure will be closed, equal to (Current Date + *TAuthent*), and when the Authenticating Natural Person should give a negative vote if he did not receive the information requested in § 4.2.4 from the new Natural Person
- the date, equal to (Current Date + *TAuthent* + *TDecAuthent*), when the vote by the Authenticating Natural Person will be considered as positive by default, if he provides no answer.

#### **4.2.6 Data structure of the Acknowledgement of Vote in a Distributed Authentication (AckVoteDistrAuth)**

The Acknowledgement of Vote in a Distributed Authentication (AckVoteDistrAuth) is automatically generated by the KuneAgi software immediately after the Natural Person issued a Vote in a Distributed Authentication. It is an Authenticated E-Mail sent to the Natural Person who just issued a Vote and containing:

- a copy of the Authenticated Vote (see § 3.4.4) registered by the Infrastructure for this Natural Person
- the information obtained after decoding the Encrypted Digest with the Natural Person's Public Key
- the hash code of the (Vote Informative Content; Current Date) couple received from the user
- the information as whether
  - the Authentication Check (as described in § 3.4.4) is successful (i.e. the hash code computed from decoding the Encrypted Digest and that from the (Informative Content; Current Date) couple match), the Vote is taken into account by the Infrastructure and the Natural Person may not vote again on this Distributed Authentication or
  - the Authentication Check fails, the Vote is being rejected and the Natural Person may attempt again to vote on this Distributed Authentication.

#### **4.2.7 Data structure of the Welcome Notification for a Natural Person (WelcomeNoteNatPers)**

The Welcome Notification (or a Natural Person (WelcomeNoteNatPers) is an Authenticated E-Mail sent to the recently authenticated Natural Person that just entered the State A1 (defined in §5.1.1), automatically generated by the KuneAgi software, and containing:

- a word of welcome
- an invitation to download the third-party, free key-pair generation software proposed on screen GIS4 (mentioned in § 8.2.1) and to generate these key-pairs for her identity as a Member and as a Natural Person
- the instructions on how to install the Private and Public Key-Pairs on her browser for her identity as a Member and as a Natural Person
- the provisional Pseudonym and Password that the Natural Person should use to access the Infrastructure as a Member once, and once only, to complete her Profile as a Member (exposed in § 4.2.3) and to start working
- the instruction to change her Pseudonym and Password once upon registration, in order to break any link between her identity as a Member and that as an Authenticated Natural Person
- the date at which these provisional Pseudonym and Password will expire, equal to  $\text{Current Date} + T_{\text{Register}}$ , and after which the benefit of her possible registration in the Infrastructure will be lost (and for which the only solution is to resign as a Natural Person, wait for the duration  $T_{\text{Quarantine}}$ , and register again)
- the Password to use upon later Log-on as a Natural Person, and the invitation to complete her Profile as a Natural Person (exposed in § 4.2.2), using a direct hypertext link provided to the Screen SNP2 (exposed in § 8.2.14)

- a copy of all valid Authenticated Votes (see § 3.4.4) received from the *NbDistribAuth* Natural Persons in charge of Distributed Authentication
- a summary of the operating mode of the KuneAgi software, for example by linking to Screen GIS1 (described in § 8.2.1).

#### **4.2.8 Data structure of the Notification of Authentication Refusal (NoteAuthRef)**

The Notification of Authentication Refusal (NoteAuthRef) is an Authenticated E-Mail sent to the Internet user whose application was rejected and just entered the State A9 (defined in §5.1.1), automatically generated by the KuneAgi software, and containing:

- a text reminding of the Distributed Authentication procedure
- the start date of the Authentication procedure
- the value of *TAuthent* at the start of the Authentication procedure
- a copy of all valid Authenticated Votes (see § 3.4.4) received from the *NbDistribAuth* Natural Persons in charge of Distributed Authentication **or** the mention of the fact that a Natural Person having the same triplet (Family name; Given name; Date of birth) already is present in the database.

#### **4.2.9 Data structure of the Welcome Notification for a Member (WelcomeNoteMember)**

The Welcome Notification for a Member (WelcomeNoteMember) is an Authenticated Internal Message sent to the Member who just logged on using his provisional Pseudonym and Password and recorded his new, and final Pseudonym in his Profile. It is automatically generated by the KuneAgi software, and contains:

- a word of welcome
- the final Pseudonym and Password that the Member just registered.

#### **4.2.10 Data structure of the Welcome Notification for a Follower (WelcomeNoteFollower)**

The Welcome Notification for a Follower (WelcomeNoteFollower) is an Internal Message sent to the Follower who just registered and thereby defined his Pseudonym and Password. It is automatically generated by the KuneAgi software, and contains:

- a word of welcome
- the Pseudonym and Password that the Follower just registered.

#### **4.2.11 Data structure of the Acknowledgement of Resignation for a Member (AckResignMember)**

The Acknowledgement of Resignation for a Member (AckResignMember) is an Authenticated Internal Message automatically generated by the KuneAgi software, sent to the Member that just resigned on his Screen S2 "My Profile" defined in § 8.2.2. This Authenticated Internal Message contains:

- a copy of the Member's Authenticated Resignation, described in § 3.4.5
- the information obtained after decoding the Encrypted Digest with the Member's Public Key
- the hash code of the (Vote Informative Content; Current Date) couple received from the user
- the information as whether

- the Authentication Check (as described in § 3.4.4) is successful (i.e. the hash code computed from decoding the Encrypted Digest and that from the (Informative Content; Current Date) couple match), the Resignation of the Member from the Infrastructure is taken into account, and therefore the Member is erased from the database or
- the Authentication Check fails, the Resignation is being rejected and the Member is maintained in the Infrastructure
- if the Authentication Check is successful, a request to log out and register again as a Natural Person to Resign separately as a Natural Person on Screen SNP3 described in § 8.2.13, with the explanation that no connection is kept in the Infrastructure of the connection between the Member and the Natural Person, and the information that the personal data contained in the database of Natural Persons will be kept unless he resigns explicitly from that Infrastructure as a Natural Person.

#### **4.2.12 Data structure of the Acknowledgement of Resignation for a Follower (AckResignFollower)**

The Acknowledgement of Resignation for a Follower (AckResignFollower) is a simple Internal Message automatically generated by the KuneAgi software, sent to the Follower that just resigned on his Screen S2 "My Profile" defined in § 8.2.2. This Internal Message contains a text acknowledging the reception of the Follower's resignation.

#### **4.2.13 Data structure of the Acknowledgement of Resignation for a Natural Person (AckResignNatPers)**

The Acknowledgement of Resignation for a Natural Person (AckResignNatPers) is an Authenticated E-Mail automatically generated by the KuneAgi software, sent to the Natural Person that just resigned on his Screen SNP3 defined in § 8.2.14, and that therefore moved into the State A9 (defined in § 5.1.1). This Authenticated E-Mail contains:

- a copy of the Natural Person's Authenticated Resignation, described in § 3.4.5
- the information obtained after decoding the Encrypted Digest with the Natural Person's Public Key
- the hash code of the (Vote Informative Content; Current Date) couple received from the user
- the information as whether
  - the Authentication Check (as described in § 3.4.4) is successful (i.e. the hash code computed from decoding the Encrypted Digest and that from the (Informative Content; Current Date) couple match), the Resignation of the Natural Person from the Infrastructure is taken into account or
  - the Authentication Check fails, the Resignation is being rejected and the Natural Person is maintained in the Infrastructure
- if the Authentication Check is successful, the date, defined in § 5.1.3, at which the data on the Natural Person (defined in § 4.2.2) will be erased from the database of the Infrastructure.

#### **4.2.14 Data structure of the Acknowledgement of Time Credit Increment (AckTimeCredit)**

The Acknowledgement of Time Credit Increment (AckTimeCredit) is an Authenticated Internal Message automatically generated by the KuneAgi software, sent to the Member that just



incremented his Time Credit on the Screen S11: "Increment my Time Credit" defined in § 8.2.11. This Authenticated Internal Message contains:

- the current date + time
- the remaining Time Credit before the increment
- the amount of the added Time Credit
- the Time Credit after the increment
- the date + time at which the Time Credit will be exhausted.

#### 4.2.15 Data structure of the Erasure Notification (EraseNote)

The Erasure Notification (EraseNote) is an Authenticated E-Mail message automatically generated by the KuneAgi software, sent to the former Natural Person (that just left the State A9 described in § 5.1.1) and whose data (described in § 4.2.2) were erased from the corresponding specific database, along the process described in § 5.1.3. This Authenticated E-Mail message contains a text notifying this erasure.

#### 4.2.16 Data structure of the Collective Decision (CollDec)

A Collective Decision (CollDec) is attached to the Working Group (WkGrp) taking it. The Individual in the FMOGI code is the Active Participant at the initiative of the Collective Decision. The Collective Decision (CollDec) is defined by:

- the starting date of the CollDec, automatically computed by the KuneAgi software following the table in § 7.7.3 (FMOGI = ---.R--.---.---.---)
- the end date of the CollDec, automatically computed by the KuneAgi software following the table in § 7.7.3 (FMOGI = ---.R--.---.---.---)
- the Collective Decision Mode valid for this CollDec, equal to that of the Working Group at the start date of the CollDec. The possible Collective Decision Modes in a Working Group are described in § 4.2.17 (FMOGI = ---.R--.---.---.---)
- the value of the Numeric Constants relevant for the vote, valid at the start date of the CollDec: *QualifMajThresh*, *QuorumVote*, *TVote\_XXX*, with XXX the acronym of the Action Proposal Category (FMOGI = ---.R--.---.---.---)
- the Active Participant who is at the initiative of the Collective Decision, called the Initiator (FMOGI = ---.R--.---.---.-W-). The Initiator for the Collective Decision on an Amendment DAMend is the Active Participant who is the Author of the Amendment.
- the list of the Members that are Active Participants at the start date of the CollDec, and are therefore entitled to participate in it (FMOGI = ---.R--.---.---.---)
- the number of Members that are Active Participants at the start date of the CollDec, and are therefore entitled to participate in it (FMOGI = ---.R--.---.---.---)
- the Category of the Collective Decision to be taken, among the following (FMOGI = ---.R--.---.---.-W-):
  - DAcceptMember - Decision to accept a Member that was on the Waiting List of the Working Group (WkGrp) as a new Active Participant of this WkGrp (*Case when the CompControlMode = APrioCont or DoubleCont*)
  - DExcluMember - Decision to exclude an Active Participant from the Working Group (*Case when the CompControlMode = APostCont or DoubleCont*)
  - DBlackList – Decision to place a Member or a Follower on the WkGrp's Black

List

- DModifCorres - Decision to modify the Corresponding Member of the WkGrp
- DModifCollDecMode - Decision to modify the Collective Decision Mode of the WkGrp
- DModifCompContMode - Decision to modify the Composition Control Mode of the WkGrp
- DSwDecision - Decision to switch the WkGrp into "Decision on Amendments" mode (i.e. into State G3 of § 7.2)
- DAmend - Decision to Accept or to Reject a Formal Amendment (FormAmend) or a Substantial Amendment (SubstAmend)
- DPubli - Decision to Publish or to Retain the Current Version of the ActProp
- the additional information specifying the Collective Decision being proposed, dependent upon the Collective Decision Category (FMOGI = ---.R--.---.---.-W-), and that are :
  - the Member proposed as a new Active Participant in the Working Group (*case when the Nature of the CollDec = DAcceptMember*)
  - the Active Participant that is being proposed to be excluded from the Working Group (*case when the Nature of the CollDec = DExcluMember*)
  - the Member (who is not an Active Participant) or the Follower that is being proposed to be placed on the WkGrp's Black List (*case when the Nature of the CollDec = DBlackList*)
  - the Active Participant proposed to take the function of new Corresponding Member of the WkGrp (*case when the Nature of the CollDec = DModifCorres*)
  - the new Collective Decision Mode proposed for the WkGrp. The possible Collective Decision Modes in a Working Group are described in § 4.2.17 (*case when the Nature of the CollDec = DModifCollDecMode*)
  - the new Composition Control Mode proposed for the WkGrp. The possible Composition Control Modes in a Working Group are described in § 4.2.17 (*case when the Nature of the CollDec = DModifCompContMode*)
  - the Substantial or Formal Amendment purpose of the Decision (*case when the Nature of the CollDec = DAmend*)
- the valid Authenticated Vote (described in § 3.4.4) of each Active Participant of the Working Group, (FMOGI = ---.R--.---.---.-W-). The Vote is irreversible (this is translated by the Writing right "W" only for this parameter, with no Modification right). For this parameter, the Individual of the FMOGI code is the Active Participant considered. The Vote may take one value and one only among the following:
  - Approval
  - Rejection
  - Abstention (default value as long as the Active Participant has not expressed his Vote)
- the date of the Vote of each Active Participant in the Working Group (FMOGI = ---.R--.---.---.---)
- the Result of the Collective Decision, automatically computed by the KuneAgi software

at the end date of the Collective Decision defined in § 7.7.3, according to the Collective Decision Mode valid for this CollDec (FMOGI = R--R--....----), along the processing logic described in § 7.7.2. The Result of a Collective Decision may take one value and one only among the following:

- Approval
- Rejection (default value).

#### 4.2.17 Data structure of the Working Group (WkGrp)

The Working Group (WkGrp) is ephemeral. Its mission is to collectively design one document (and one only): the Action Proposal (ActProp) that is attached to it. A doubly univocal relationship exists between Working Group (WkGrp) and Action Proposal (ActProp): each WkGrp produces one ActProp and one only, each ActProp is produced by one WkGrp and one only.

A WkGrp is considered as "Active" (States G2, G3, G4 and G5 of the Action Proposal Production Process described in §7.2) if it contains at least *MinNbWkGrp\_XXX* Active Participants: this number depends upon the Action Proposal Category being produced (among those described in § 4.3.3), and the three letters *XXX* in the name of the constant define the Action Proposal Category considered. In order to have an efficient dialogue and a concrete possibility to listen to each Active Participant, a WkGrp contains a maximum of *MaxNbWkGrp* Active Participants.

The WkGrp is dissolved at the end of the Action Proposal Production Process (the WkGrp is then in the State G9 defined in § 7.2).

The position "I" of the FMOGI code relevant to the rights on the data defining a Working Group (WkGrp) designates the Member who is the author of the Initial Version of the ActProp upon which the WkGrp operates. This Member, author of the Initial Version of the ActProp, is the first Active Participant in the WkGrp.

A Working Group (WkGrp) is defined by:

- the Action Proposal (ActProp) upon which it operates (FMOGI = R--R--....----)
- the Collective Decision Mode (ColDecisionMode) of the WkGrp (FMOGI = ---R---....--C.-W-). The Collective Decision Mode (ColDecisionMode) is initially defined by the Member author of the Initial Version of the ActProp (Writing right "W" for the position "I" in the FMOGI code), and is later modified by Collective Decision of all Active Participants in the WkGrp (Collective Modification right "C" for the position "G" in the FMOGI code). The Collective Decision Mode (ColDecisionMode) may take one value and one only among the following:
  - Consensus
  - Simple Majority (SimpleMaj)
  - Qualified Majority (QualifMaj)
  - Unanimity (Unanim)

The processing logic of Collective Decisions for each Collective Decision Mode is described in § 7.7.2

- the Composition Control Mode (CompControlMode) of the WkGrp (FMOGI = ---R---....--C.-W-). The Composition Control Mode (CompControlMode) is initially defined by the Member author of the Initial Version of the ActProp (Writing right "W" for the position "I" in the FMOGI code), and is later modified by Collective Decision of all Active Participants in the WkGrp (Collective Modification right "C" for

the position "G" in the FMOGI code). The Composition Control Mode (CompControlMode) may take one value and one only among the following:

- Freedom (Free)
- *A priori* Control (APrioCont):
- *A posteriori* Control (APostCont)
- Double Control (DoubleCont)

The processing logic of Composition Control for each Composition Control Mode is described in § 6.3.

- the list of Members that are Active Participants in this Working Group (FMOGI = ---R--.---.---C.-W-). The Active Participants in a WkGrp control the composition of the WkGrp along the CompControlMode chosen for it, if necessary by using the Human-Machine Interface function described in § 8.2.6.
- for each Active Participant in this Working Group, the date of his last Contribution to the ActProp that is the purpose of this WkGrp (FMOGI = ---.---.---R--.---). A Contribution to a ActProp is one of the following actions:
  - write and save in the database the Initial Version of the ActProp
  - write and save in the database a Formal Amendment (FormAmend)
  - write and save in the database a Substantial Amendment (SubstAmend)
  - write and save in the Report on Exchange of Arguments and Information (REAI) an information or argument relative to the Current Version of the ActProp, to a Formal Amendment or to a Substantial Amendment
- for each Active Participant of this Working Group, the link to his last Contribution to the ActProp purpose of this WkGrp (FMOGI = ---.---.---R--.---)
- the Waiting List of Members waiting to become Active Participants in this Working Group (WkGrp) (FMOGI = ---.---.---R--.---)
- the list of Observers to this Working Group (FMOGI = ---R---R---.---.---). The number of Observers in a Working Group is unlimited. All the Members in the Waiting List of a Working Group are also Observers of this WkGrp.
- the number of Active Participants in the WkGrp (FMOGI = R--R--.---.---.---)
- the number of Members in the Waiting List of the WkGrp (FMOGI = ---R--.---.---.---)
- the number of Observers in the WkGrp (FMOGI = R--R--.---.---.---)
- the State of the WkGrp, as defined in §7.2 (FMOGI = R--R--.---.---.---)
- the Active Participant having the function of Corresponding Member, i.e. the contact point for the Members exterior to the Working Group (FMOGI = R--R--.---.---C.-W-). The Member author of the Initial Version of the ActProp is the first Corresponding Member of the WkGrp. The identity of the Corresponding Member may be modified by a Collective Decision of the WkGrp.
- its Black List (FMOGI = ---.---.---R-C.-W-), i.e. the list of Followers and Members that are not Active Participants in the WkGrp and that may perform none of the functions listed below. The Black List is initially empty. The functions forbidden to Followers and Members on the WkGrp's Black List are:
  - sending an Internal Message to the Corresponding Member of the WkGrp

- sending an Internal Message to any Active Participant of the WkGrp
- make any modification to the External Debate Report (described in § 4.3.5) of the ActProp attached to the WkGrp
- make any Structured Feedback (described in § 4.3.9) to the ActProp attached to the WkGrp

#### 4.2.18 Data structure of the Vote Start Notification (VoteStartNote)

The Vote Start Notification (VoteStartNote) is automatically generated by the KuneAgi software upon the event signalling the start of a Collective Decision procedure (specified in § 7.7). It is an Authenticated Internal Message sent to all Active Participants in the Working Group (WkGrp) that is mobilised to take this Collective Decision. In the specific case of a proposal to take the Collective Decision of Excluding an Active Participant, the Active Participant considered is informed of this procedure in the same manner as the other Active Participants in the WkGrp (even if he has no voting right - cf. § 7.7.1).

The Vote Start Notification (VoteStartNote) contains as a minimum:

- the Category of the Collective Decision considered, within the list given in § 4.2.16
- the additional information specifying the Collective Decision, as described in § 4.2.16. **If** the Category of the CollDec = DAMend, **then** the additional information contains the list of all FormAmend and all SubstAmend upon which a Vote is requested during the period when the ActProp is in State D4 "Decision on Amendments" (defined in § 7.1).
- the value of *TVote\_XXX*, with XXX the acronym of the Action Proposal Category, valid at the start of the CollDec
- the Decision Mode valid for this CollDec
- **If** Decision Mode = QualMaj, **then** the value of *QualifMajThresh* and of *QuorumVote*, valid at the start of the CollDec
- the end date of the Collective Decision procedure
- a hyperlink towards the Vote function on this Collective Decision, described in § 8.2.6, and accessible from screen S6.

#### 4.2.19 Data structure of the Acknowledgement of Vote in a Collective Decision (AckVoteCollDec)

The Acknowledgement of Vote in a Collective Decision (AckVoteCollDec) is automatically generated by the KuneAgi software immediately after an Active Participant issued a Vote in a Collective Decision. It is an Authenticated Internal Message sent to the Active Participant who just issued a Vote and containing:

- a copy of the Authenticated Vote (see § 3.4.4) registered by the Infrastructure for this Active Participant
- the information obtained after decoding the Encrypted Digest with the Active Participant's Public Key
- the hash code of the (Vote Informative Content; Current Date) couple received from the user
- the information as whether
  - the Authentication Check (as described in § 3.4.4) is successful (i.e. the hash code computed from decoding the Encrypted Digest and that from the (Informative Content; Current Date) couple match), the Vote is taken into

account by the Infrastructure and the Active Participant may not vote again on this Collective Decision or

- the Authentication Check fails, the Vote is being rejected and the Active Participant may attempt again to vote on this Collective Decision.

#### **4.2.20 Data structure of the Vote Result Notification (VoteResuNote)**

The Vote Result Notification (VoteResuNote) is automatically generated by the KuneAgi software upon the event signalling the end of a Collective Decision procedure (specified in § 7.7). It is an Authenticated Internal Message sent to all Active Participants in the Working Group (WkGrp) that is mobilised to take this Collective Decision. In the specific case of a proposal to take the Collective Decision of Excluding an Active Participant, the Active Participant considered is informed of the result in the same manner as the other Active Participants in the WkGrp (even if he has no voting right - cf. § 7.7.1).

The Vote Result Notification (VoteResuNote) contains as a minimum:

- the starting date of the CollDec
- the end date of the CollDec
- the Collective Decision Mode valid for this CollDec, equal to that of the Working Group at the start date of the CollDec
- the value of *TVote\_XXX*, with XXX the acronym of the Action Proposal Category, valid at the start date of the CollDec
- if Decision Mode = QualMaj, the value of *QualifMajThresh* and *QuorumVote*, valid at the start date of the CollDec
- the list of the Members that are Active Participants at the start date of the CollDec, and are therefore entitled to participate in it
- the number of Members that are Active Participants at the start date of the CollDec, and are therefore entitled to participate in it
- the Category of the Collective Decision considered, within the list given in § 4.2.16
- the additional information specifying the Collective Decision, as described in § 4.2.16
- a copy of all valid Authenticated Votes (see § 3.4.4) received
- the result of the Collective Decision, according to the valid Authenticated Votes received and to the Collective Decision Mode valid for that Collective Decision, computed according to the procedure described in § 7.7.

#### **4.2.21 Data structure of the Notification of Acceptance as an Active Participant in the Working Group (NoteAccept)**

The Notification of Acceptance as an Active Participant in the Working Group (NoteAccept) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to the new Active Participant in a Working Group (WkGrp) when she is accepted in it, whatever the reason of this acceptance, and whatever the Composition Control Mode (CompControlMode) of the WkGrp.

The Notification of Acceptance as an Active Participant in the Working Group (NoteAccept) contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp related to the WkGrp of which the Member was just accepted as an Active Participant

- if the Composition Control Mode was A Priori Control or Double Control, the Vote Result Notification of the Collective Decision for his Acceptance as a new Active Participant (DAcceptMember).

#### **4.2.22 Data structure of the Notification of Refusal as an Active Participant in the Working Group (NoteRefusal)**

The Notification of Refusal as an Active Participant in the Working Group (NoteRefusal) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to the Member having applied to become an Active Participant in a Working Group (WkGrp) when the Composition Control Mode (CompControlMode) of the WkGrp was A Priori Control or Double Control, and when she is refused in it, whatever the reason of this refusal.

The Notification of Refusal as an Active Participant in the Working Group (NoteRefusal) contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp related to the WkGrp of which the Member was just refused as an Active Participant
- the Vote Result Notification of the Collective Decision for his Refusal as a new Active Participant (DAcceptMember)
- the information that the Member is now considered as an Observer of that WkGrp.

#### **4.2.23 Data structure of the Notification of Acceptance on the Waiting List of the Working Group (NoteWaitList)**

The Notification of Acceptance on the Waiting List of the Working Group (NoteWaitList) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to the Member that just entered the Waiting List of a Working Group (WkGrp).

The Notification of Acceptance on the Waiting List of the Working Group (NoteWaitList) contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp related to the WkGrp of which the Member was just accepted in the Waiting List
- the information that the Member has Observer rights in the WkGrp
- the reason why the Member is placed on the Waiting List, among the following:
  - the WkGrp is full, i.e. the number of Active Participants in the WkGrp = *MaxNbWkGrp*
  - the Composition Control Mode of the WkGrp is *APrioriCont* or *DoubleCont* and the Collective Decision is pending
- if the Composition Control Mode of the WkGrp is *APrioriCont* or *DoubleCont*, the End Date of the Collective Decision regarding his Acceptance as a new Active Participant.

#### **4.2.24 Data structure of the Acknowledgement of the Member or of the Follower as an Observer in the Working Group (AckObserverIn)**

The Acknowledgement of the Member as an Observer 4.2.23 or of the Follower in the Working Group (AckObserverIn) is automatically generated by the KuneAgi software. It is an Internal Message sent to the Member or to the Follower when she registered as an Observer to the Working Group (WkGrp).

The Acknowledgement of the Member as an Observer or of the Follower in the Working Group (AckObserverIn) contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp related to the WkGrp

to which the Member of the Follower just registered as an Observer.

#### **4.2.25 Data structure of the Notification of Active Working Group (NoteActWkGrp)**

The Notification of Active Working Group (NoteActWkGrp) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to each Active Participant and to each Observer of the Working Group (WkGrp) that just became Active (i.e. just moved into State G2 of the §7.2). It contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp whose WkGrp just became Active
- the information that the Action Proposal Under Production is now in Debate mode, and that Amendments are expected
- the current value of *MinNbWkGrp\_XXX*, with XXX the acronym of the Action Proposal Category.

#### **4.2.26 Data structure of the Warning for Inactive Member in the Working Group (WarnInactMemb)**

The Warning for Inactive Member in the Working Group (WarnInactMemb) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to an Active Participant of the Working Group (WkGrp) that brought no Contribution to this Working Group since too long. The logical conditions for the sending of the WarnInactMemb are specified in § 9.2.

The Warning for Inactive Member in the Working Group (WarnInactMemb) contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp to which the Active Participant brought no recent Contribution
- the date of the last Contribution of this Active Participant
- the current value of *MaxTInactMb*
- the date (specified in § 9.2) at which she will lose her function as an Active Participant in this WkGrp, and will become a simple Observer in this WkGrp, if she brings no new Contribution .

#### **4.2.27 Data structure of the Warning for Inactive Working Group (WarnInactWkGrp)**

The Warning for Inactive Working Group (WarnInactWkGrp) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to each Active Participant of the Working Group (WkGrp) that remained Inactive too long. The logical conditions for the sending of the WarnInactWkGrp are specified in § 9.1.

The Warning for Inactive Working Group (WarnInactWkGrp) contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp whose WkGrp remained Inactive
- the date when the WkGrp last became Inactive (= entered State G2 of § 7.2)
- the current value of *MaxTInactWkGrp*
- the date (specified in § 7.3) at which the WkGrp will be dissolved (State G9) and the ActProp stopped (State D98) if the WkGrp does not switch back to "Active" State (State G2)
- an hyperlink towards the function "Propose the Collective Decision to Accept a new



Active Participant" in this WkGrp, described in § 8.2.6 and accessible from screen S6 (if the *CompControlMode* of the *WkGrp* = *APrioCont* or *DoubleCont*).

#### **4.2.28 Data structure of the Warning for Fruitless Working Group (WarnFruitlessWkGrp)**

The Warning for Fruitless Working Group (WarnFruitlessWkGrp) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to each Active Participant of the Working Group (WkGrp) that did not adopt a new Current Version of its ActProp for too long. The logical conditions for the sending of the WarnFruitlessWkGrp are specified in § 9.1.

The Warning for Fruitless Working Group (WarnFruitlessWkGrp) contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp whose WkGrp remained with no agreement on a new Current Version of the ActProp
- the date when the last Current Version of the ActProp was accepted
- the current value of *MaxTNoAgree*
- the date (specified in § 7.3) at which the WkGrp will be dissolved (State G9) and the ActProp stopped (State D98) if the WkGrp does not adopt a new Current Version of the ActProp or if it does not decide to Publish the Current Version of its ActProp
- an hyperlink towards the function "Propose the Collective Decision to switch the WkGrp in 'Decision on Amendments' Mode" or "Propose the Collective Decision to Publish the Current Version of the ActProp", described in § 8.2.6, and accessible from screen S6.

#### **4.2.29 Data structure of the Notification of an Inactive Working Group (NoteInactWkGrp)**

The Notification of an Inactive Working Group (NoteInactWkGrp) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to each Active Participant and to each Observer of the Working Group (WkGrp) that just became Inactive (State G1 of the §7.2). The logical conditions for the sending of the NoteInactWkGrp are specified in § 7.3.

The Notification of an Inactive Working Group (NoteInactWkGrp) contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp whose WkGrp just became Inactive
- the current value of the Minimum Number of Active Participants in a Working Group *MinNbWkGrp\_XXX*, with XXX being the acronym of the Action Proposal Category (as defined in § 18 and modified according to procedure of § 9.3)
- an hyperlink towards the function "Propose the Collective Decision to Accept a new Active Participant" in this WkGrp, described in § 8.2.6 and accessible from screen S6 (if the *CompControlMode* of the *WkGrp* = *APrioCont* or *DoubleCont*)

#### **4.2.30 Data structure of the Acknowledgement of Resignation for an Active Participant (AckResignActPart)**

The Acknowledgement of Resignation for an Active Participant (AckResignActPart) is an Authenticated Internal Message automatically generated by the KuneAgi software, sent to the Member that just resigned from his position as Active Participant in a Working Group on his Screen S6 "My Working Groups" defined in § 8.2.6. This Authenticated Internal Message contains:

- a copy of the Member's Authenticated Resignation from this Working Group, described in § 3.4.5
- the information obtained after decoding the Encrypted Digest with the Active Participant's Public Key
- the hash code of the (Vote Informative Content; Current Date) couple received from the user
- the information as whether
  - the Authentication Check (as described in § 3.4.4) is successful (i.e. the hash code computed from decoding the Encrypted Digest and that from the (Informative Content; Current Date) couple match), the Resignation is taken into account by the Infrastructure and the Member is no more an Active Participant of the Working Group or
  - the Authentication Check fails, the Resignation is being rejected and the Member remains an Active Participant in the Working Group.

#### **4.2.31 Data structure of the Acknowledgement of Resignation for an Observer (AckObserverOut)**

The Acknowledgement of Resignation for an Observer (AckObserverOut) is an Authenticated Internal Message automatically generated by the KuneAgi software, sent to the Member or the Follower that just resigned from his position as Observer in a Working Group on his Screen S6 "My Working Groups" defined in § 8.2.6. This Authenticated Internal Message contains:

- the Reference Number, the Title and the Summary of the ActProp whose WkGrp she left as an Observer.

#### **4.2.32 Data structure of the Acknowledgement of Resignation from the Waiting List (AckResignWaitList)**

The Acknowledgement of Resignation from the Waiting List (AckResignWaitList) is an Authenticated Internal Message automatically generated by the KuneAgi software, sent to the Member that just resigned from a Working Group's Waiting List on his Screen S6 "My Working Groups" defined in § 8.2.6. This Authenticated Internal Message contains:

- a copy of the Member's Authenticated Resignation from this the Working Group's Waiting List, described in § 3.4.5
- the information obtained after decoding the Encrypted Digest with the Active Participant's Public Key
- the hash code of the (Vote Informative Content; Current Date) couple received from the user
- the information as whether
  - the Authentication Check (as described in § 3.4.4) is successful (i.e. the hash code computed from decoding the Encrypted Digest and that from the (Informative Content; Current Date) couple match), the Resignation is taken into account by the Infrastructure and the Member is no more on the Waiting List of the Working Group or
  - the Authentication Check fails, the Resignation is being rejected and the Member remains on the Waiting List of the Working Group.

#### **4.2.33 Data structure of the Notification of Eviction of a Member out of a Working Group (NoteEvict)**

The Notification of Eviction of a Member out of a Working Group (NoteEvict) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to a Member who just lost his status as an Active Participant of a Working Group.

The Notification of Eviction of a Member out of a Working Group (NoteEvict) contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp being produced by the WkGrp where he just lost his status as an Active Participant
- the motive of his eviction out of the WkGrp. This motive may take the following values:
  - Collective Decision by the other Active Participants in the WkGrp
  - Inactivity of the Member for a duration superior to *MaxTInactMb*
- the current value of *MaxTInactMb*
- the additional information justifying his eviction:
  - the Vote Result Notification of the Collective Decision for his Exclusion
  - the last Acknowledgement for Receiving a Contribution from this Member for this ActProp.

#### **4.2.34 Data structure of the Notification of placement of a Member or a Follower on the Black List of a Working Group (NoteBlackList)**

The Notification of placement of a Member or a Follower on the Black List of a Working Group (NoteBlackList) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to a Member or to the Follower who was just placed on the Black List of a Working Group.

The Notification of placement of a Member or a Follower on the Black List of a Working Group (NoteBlackList) contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp being produced by the WkGrp where he was just placed on the Black List
- the Vote Result Notification of the Collective Decision to place him on the Working Group's Blacklist.

#### **4.2.35 Data structure of the Invitation to Evaluate (InvitEval)**

The Invitation to Evaluate (InvitEval) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to each Active Participant of the Working Group (WkGrp) that one of its Active Participants just left (whatever the reason) or that was just dissolved (entry in the State G9 of the §7.2).

The Invitation to Evaluate the other Active Participants in the Working Group (InvitEval) contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp on which the WkGrp operates or operated
- a link towards the Mutual Marking Screen (MutMarkS) of the Active Participant(s) of the WkGrp that the user is invited to evaluate, described in § 8.4.

#### **4.2.36 Data structure of the Distributed White Pages Update**

The Distributed White Pages Update is automatically generated by the KuneAgi software. It is an Authenticated E-Mail sent to a Natural Person whose list of Corresponding Natural Persons changed. It contains the new list of e-mail addresses of the Corresponding Natural Persons for that Natural Person, as described in § 4.2.2.

#### **4.2.37 Data structure of the Request to Update as a Natural Person**

The Request to Update as a Natural Person is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to all Members of the Infrastructure, and contains as a minimum:

- a text describing the Periodic Clean-Up procedure (§ 5.3) the need to keep a clean database of Natural Persons and the reason why it cannot be done automatically, because of the deliberate break of relationship between Members and Natural Persons
- the new Update Code to be used
- the date after which the Natural Person will be considered as having resigned, if no action is taken. This date is equal to  $\text{Current Date} + TEvictNaturalPerson$ .

### **4.3 Common objects relating to Action Proposals and to their production process**

#### **4.3.1 List of common objects**

The objects common to the production of all Action Proposals that may be processed by the KuneAgi software, whatever their Category, are the following:

- the Action Proposal (ActProp), described in § 4.3.2
- the Action Proposal Category, described in § 4.3.3
- the Report on Exchange of Arguments and Information (REAI), described in § 4.3.4
- the External Debate Report (ExtDebReport), described in § 4.3.5
- the Formal Amendment (FormAmend), described in § 4.3.6
- the common fraction of the Substantial Amendment (SubstAmend), described in § 4.3.7
- the Acknowledgement of Receiving a Contribution (AckContribute), described in § 4.3.8
- the Structured Feedback, described in § 4.3.9
- the Implementation Status Update, described in § 4.3.10
- the New Action Proposal Notification (NewActPropNote), described in § 4.3.11
- the common fraction of the Action Proposal (ActProp), described in § 4.3.12
- the Acknowledgement of Vote in a Distributed Moderation (AckVoteDModer), described in § 4.3.13
- the Notification of Decision by the Distributed Moderation (NoteDecDMod), described in § 4.3.14
- the Notification of Action Proposal in Debate Mode (NoteActPropDeb), described in § 4.3.15
- the Notification of New Amendment (NoteNewAmend), described in § 4.3.16

- the Notification of New Version (NoteNewVersion), described in § 4.3.17
- the Acknowledgement of Vote in a Distributed Control of Compliance with Principles and of Plagiarism Prevention (AckVoteDCCPPP), described in § 4.3.18
- the Notification of Decision by the Distributed Control of Compliance with Principles and of Plagiarism Prevention (NotDecCCPPP), described in § 4.3.19
- the Publication Notification of the Action Proposal (PubNote), described in § 4.3.20
- the Notification of Action Proposal Sufficiently Supported (NoteActPropSupported), described in § 4.3.21
- the Notification of Action Proposal Insufficiently Supported (NoteActPropInsuffSupport), described in § 4.3.22
- the Warning for Action Proposal Insufficiently Supported (WarnActPropInsuffSupport), described in § 4.3.23
- the Notification of Implementation Decision (NoteImplDec), described in § 4.3.24
- the Process Stop Notification (ProcStopNote), described in § 4.3.25
- the Invitation to Moderate (InvitModer), described in § 4.3.26
- the Invitation to Control the Compliance with Principles and to Prevent Plagiarism (InvitCCPPP), described in § 4.3.27
- the Notification of Change in the Numeric Constants (NumConstChangeNote), described in § 4.3.28
- the Proposal to Improve the KuneAgi software (PropImprove), described in § 4.3.29.

#### **4.3.2 General structure of the Action Proposals (ActProp)**

The Action Proposal (ActProp) contains a common fraction, described in the present paragraph (§ 4.3), and a fraction specific to each Action Proposal Category, detailed in the paragraph dedicated to this Action Proposal Category (§ 4.5 to 4.7 included).

The general structure of an Action Proposal (ActProp) is the following:

- Indexing Meta-Data(\*)
- Progress Status
- Working Group in charge of the ActProp
- Content of the Current Version (\*)
- Justification for the Content of the Current Version
- Trace of the Production Process
- External Supports received.

The fields marked with an asterisk (\*) in the list above are the Mandatory Fields for the validation of the Initial Version of a ActProp, as defined in §7.1.

#### **4.3.3 Data structure of the Action Proposal Category**

Each Action Proposal (ActProp) belongs to one of the Action Proposal Categories described below, and to one only:

- Public Policy Proposal (PPP), whose specific elements are described in § 4.5
- Electoral Programme of a candidate or of a list of candidates to political elections

(ElectProg), whose specific elements are described in § 4.6

- Investment Proposal (InvestProp), whose specific elements are described in § 4.7.

This list of Action Proposal Categories may evolve with new functionalities and application fields of the KuneAgi software.

#### 4.3.4 Data structure of the Report on Exchange of Arguments and Information (REAI)

The Report on Exchange of Arguments and Information (REAI) is an element of the Trace of the ActProp's Production Process, and traces the exchanges and debates between the Active Participants in a Working Group (WkGrp), concerning the Formal (FormAmend), Substantial Amendments (SubstAmend) proposed, on the Current Versions and the Final Version of the Action Proposal (ActProp). It is a document **internal** to the Working Group. The REAI is reinitialised at each new Current Version of the ActProp (cf. § 7.4), because it becomes obsolete once the ActProp was modified.

A Report on Exchange of Arguments and Information (REAI) is defined by :

- the link to the Version of the Action Proposal (ActProp), the Formal Amendment (FormAmend) or the Substantial Amendment (SubstAmend) to which it applies (FMOGI = ---.---.---.R--.---).
- the text and the date of the arguments and information from Active Participants in the Working Group (WkGrp), in written form, in increasing or decreasing chronological order, at the reader's choice. This information and these arguments may take the form of the trace of exchanges on a forum, a wiki or a blog tool (FMOGI = ---.---.---.RW-.---)
- the Member, Active Participant of the WkGrp, author of each argument or information, with the date-time of registration of this Contribution (FMOGI = ---.---.---.R--.---).

#### 4.3.5 Data structure of the External Debate Report (ExtDebReport)

The External Debate Report (ExtDebReport) is an element of the Trace of the ActProp's Production Process, and relates to the public debates between Active Participants and Observers of a Working Group (WkGrp), and later between all Members and Followers on the Published version of a ActProp. The ExtDebReport is reinitialised at each new Current Version of the ActProp (cf. § 7.4), because it becomes obsolete once the ActProp was modified. It is therefore of the responsibility of the Active Participants in the WkGrp to integrate the arguments and information received from external sources when they receive them, if they are relevant.

If a Member has definite ideas and modification proposals to make to the ActProp, the procedure for her to provide this feedback is to become an Active Participant in the WkGrp.

An External Debate Report (ExtDebReport) is defined by:

- the link towards the Version of the Action Proposal (ActProp) to which it applies (FMOGI = ---.---.---.R--.---).
- the text of arguments and informations by Active Participants and Observers in the Working Group (WkGrp) or by Members and Followers, in written form, in increasing or decreasing chronological order, at the reader's choice. This information and these arguments may take the form of the trace of exchanges on a wiki tool (FMOGI = R--.R--.-WM.-WM.--- when the ActProp is in one of the States D3 or D4 of § 7.1; FMOGI = RWM.RWM.---.---.--- when the ActProp is in one of the States D6 , D7 or D8; FMOGI = R--.R--.---.---.--- when the ActProp is in one of the other States)
- the Active Participant or Observer of the WkGrp, (when the ActProp is in States D3 or D4), or the Member or the Follower (when the ActProp is in States D6, D7 or D8),

author of each argument or information or of its modification, with the date-time of registration of this Contribution (FMOGI = R--.R--.---.---.---).

The very open and revertible character of the modifications brought to the ExtDebReport contributes to the distributed moderation of its content. Each Member and each Follower is co-responsible for the compliance with the Moderation Rules in the ExtDebReport, by having the capacity at any time to modify (and specifically to erase reversibly) non-compliant texts.

#### 4.3.6 Data structure of the Formal Amendment (FormAmend)

An Amendment (Formal Amendment as described hereafter or Substantial Amendment described in § 4.3.7 and in the sections specific to each Action Proposal Category in § 4.5 and following) is a proposal to modify a specific segment of text and to replace it by another one, independently from the decision taken about other similar Amendments existing on the same text. This function is specifically badly suited to wikis, where the modifications are stacked over one another, and where it is impossible to implement selectively a modification at the "bottom" of the stack.

The Formal Amendment (FormAmend) is a proposal to modify the Content or the Justification for the Content of an Action Proposal (ActProp), which relates to spelling, linguistic or grammar correctness, to the style, to the ease of understanding or to the resolution of ambiguousness, without affecting the text's meaning.

A FormAmend is written by a Member who is an Active Participant in the WkGrp. The rights described in the FMOGI code for the Individual (position "I") are relative to the Member author of the FormAmend.

A Formal Amendment (FormAmend) is defined by:

- the identity of the Action Proposal (ActProp) on which it operates (FMOGI = ---.---.R--.R--.-W-)
- the modification brought to the text (FMOGI = ---.---.R--.R--.-WM):
  - the location in the text where the modification is implemented = the character in the existing text where the modification starts
  - the chain of characters being suppressed, defined by the character in the existing text where the modification ends (this chain may be void, i.e. the start character is equal to the end character, and the modification is a pure addition of text)
  - the chain of characters being added (this chain may be void, i.e. the modification is a pure erasure of text)
  - the boolean variable "Replace all occurrences". The default value of this boolean variable is set to FALSE.
- the Member, Active Participant of the Working Group (WkGrp), who is the author of the FormAmend (FMOGI = ---.---.R--.R--.---)
- the Report on Exchange of Arguments and Information (REAI) relative to this FormAmend.
  - A FormAmend may be visualised in the form of visible corrections brought to the text (analogue to the mode "visualisation of modifications" in a text editor) or in a form integrated in the text, at the reader's choice.

#### 4.3.7 Data structure of the common fraction of Substantial Amendments (SubstAmend)

The Substantial Amendment (SubstAmend) is a proposal to modify the Content or the Justification for the Content of an Action Proposal (ActProp), which relates to the meaning and

the substance of the text. The Substantial Amendment (SubstAmend) contains a common fraction, described in the present paragraph (§ 4.3), and a fraction specific to each Action Proposal Category, detailed in the paragraph dedicated to this Action Proposal Category (§ 4.5.9 for the Public Policy Proposals and § 4.7.10 for the Investment Proposals).

A SubstAmend is written by a Member, who is Active Participant in the WkGrp. The rights described in the FMOGI code for the Individual (position "I") are relative to the Member author of the SubstAmend.

The common fraction of the Substantial Amendment (SubstAmend) is identical to the information defining a Formal Amendment (§ 4.3.6).

A SubstAmend may be visualised in the form of visible corrections brought to the text (analogue to the mode "visualisation of modifications" in a text editor) or in a form integrated in the text, at the reader's choice.

#### **4.3.8 Data structure of the Acknowledgement of Receiving a Contribution (AckContribute)**

The Acknowledgement of Receiving a Contribution (AckContribute) is automatically generated by the KuneAgi software immediately after an Active Participant made a Contribution to a ActProp. It is an Authenticated Internal Message sent to the Active Participant who just made a Contribution, and containing:

- the identity of the Action Proposal (ActProp) where the Contribution was made
- the nature of the Contribution, within the list of actions defined in § 4.2.17.

#### **4.3.9 Data Structure of the Structured Feedback**

The Structured Feedback is an observation made by Members on the Published Version of a ActProp (i.e. in States D6 and D7 of § 7.1). It describes a modification that Members would like further Action Proposals building upon this one to take, weighted by the number of Members that have these wishes and by the nature of the opinions being expressed.

The Structured Feedback is defined by:

- the identity of the Action Proposal (ActProp) on which it operates (FMOGI = R--R--....-W-, where the Individual is the Member who first made the Modification Proposal)
- the Modification Proposal brought to the text: addition and / or suppression of characters (FMOGI = -R--R--....-W-, where the Individual is the Member who first made the Modification Proposal)
- the Member, who is the author of the Modification Proposal (FMOGI = R--R--....-)
- the list of Marks received from Members on the Modification Proposal (FMOGI = R--R--....-WM, where the Individual is the Member giving the Mark). A given Member may give only one Mark per Structured Feedback. This Mark may take one, and one only, among the following values, in descending order of appreciation:
  - Sufficient condition for a support (= "I would approve the ActProp, i.e. allocate it a Support Token or place it on top of my Schulze Ballot, if this Modification Proposal was included")
  - Indication for an increase in preference (= "This would make the ActProp even more worth being supported, i.e. I would improve the position of the document



- on my Schulze Ballot if this Modification Proposal was included")
- Indication for a decrease in preference (= "I would still approve the ActProp, but would consider this modification as a degradation, i.e. I would degrade the position of the document on my Schulze Ballot if this Modification Proposal was included")
- Sufficient condition for a rejection (= "I would reject the ActProp, i.e. take away my Support Token or place it far down on my Schulze Ballot, if this Modification Proposal was included").

#### 4.3.10 Data structure of the Implementation Status Update

The Implementation Status Update is information provided by Implementers on the current situation of an Action Proposal that has been selected for implementation (i.e. in State D8 of § 7.1). The FMOGI codes refer to the Implementer who writes the Implementation Status Update. It contains:

- the Current Date (FMOGI = R--.R--.---.---.---)
- the Family Names, Given Names and Official Positions of the Natural Persons in charge of the Implementation (FMOGI = R--.R--.---.---.-W-)
- the current value of the **total** budget (in hours of work / in financial means) allocated to the Implementation of the Action Proposal (FMOGI = R--.R--.---.---.-W-)
- the current value of the **remaining** budget (in hours of work / in financial means) allocated to the Implementation of the Action Proposal (FMOGI = R--.R--.---.---.-W-)
- the list of milestones having been reached, with the date when they were indeed reached (FMOGI = R--.R--.---.---.-W-)
- the list of milestones remaining to be reached, with the current estimation of the date when they should be reached (FMOGI = R--.R--.---.---.-W-).

#### 4.3.11 Data structure of the New Action Proposal Notification (NewActPropNote)

The New Action Proposal Notification (NewActPropNote) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to each Member or Follower whose Close Topics of Interest correspond to the Indexing Meta-Data of the Action Proposal (ActProp) that just switched into State D2 (described in §7.1), following a positive decision by the Distributed Moderation. This Notification allows Members that would wish to do so to apply in the Working Group as an Active Participant or to register as an Observer, and to Followers that wish to do so to register as an Observer.

The New Action Proposal Notification (NewActPropNote) contains as a minimum:

- the Close Topic of Interest of the Member or of the Follower to which the ActProp that just switched into State D2 relates
- the Reference Number, the Title and the Summary of the ActProp that was just validated
- a hyperlink towards the function "Register in the Working Group" of the Working Group in charge of producing this ActProp, described in § 8.2.5.

#### 4.3.12 Data structure of the common fraction of Action Proposals (ActProp)

The common fraction of Action Proposals (ActProp) is defined by the following table.

The component of the ActProp's general structure is the one described in the presentation of §4.3.2. The rights described in the FMOGI code for the Individual (position "I") are relative to

the Member author of the Initial Version of the ActProp: they are valid only as long as the ActProp is in the State D0 defined in § 7.1. As soon as the ActProp is in another State, the Member author of the Initial Version only has the rights strictly related to her status in the Working Group (Active Participant, Observer, external Member, Follower), with absolutely no specificity. The rights described in the FMOGI code for the Working Group (position "G") are valid only as long as the ActProp is in the States D3 and D4.

<b>Element of the common fraction of ActProps</b>	<b>Component of the general structure</b>	<b>FMOGI code</b> (relative to the Member author of the Initial Version of the ActProp)
Reference Number (generated upon the first registration of the Initial Version of the ActProp, transition towards the State D0 of the §7.1). This Reference Number is the unique identifier of the ActProp in the Infrastructure. In the whole KuneAgi software, when the Reference Number of a ActProp appears on a screen, a hypertext link gives access to the complete ActProp and a second link towards the attached WkGrp, presented as described in § 8.1	Indexing Meta-Data	R--.R--.---.---.---
Action Proposal Category of the ActProp	Indexing Meta-Data	R--.R--. ---.---.-W-
Title of the ActProp (of length inferior or equal to <i>MaxNbCharTitle</i> )	Content of the Current Version	R--. R--. ---.-C.-W-
Summary of the ActProp (of length inferior or equal to <i>MaxNbCharSumm</i> )	Content of the Current Version	R--. R--. ---.-C.-W-
Identity of the Working Group in charge of the ActProp	Working Group in charge of the ActProp	R--.R--.---.---.---
Current State in the Action Proposal Production Process (cf. § 7.1)	Progress Status	R--.R--.---.---.---
Number of the Current Version	Progress Status	R--.R--.---.---.---
Date when the Current Version was Accepted	Trace of the Production Process	---.R--.---.---.---
Date when the ActProp entered in the State D0 (defined in § 7.1)	Trace of the Production Process	---.R--.---.---.---
Date when the ActProp entered in the State D1 (defined in § 7.1)	Trace of the Production Process	---.R--.---.---.---
Date when the ActProp entered for the last time in the State D2 (defined in § 7.1)	Trace of the Production Process	---.R--.---.---.---
Date when the ActProp entered for the last time in the State D3 (defined in § 7.1)	Trace of the Production Process	---.R--.---.---.---
Date when the ActProp entered for the last time in the State D4 (defined in § 7.1)	Trace of the Production Process	---.R--.---.---.---
Date when the ActProp entered in the State D5 (defined in § 7.1)	Trace of the Production Process	---.R--.---.---.---
Date when the ActProp entered for the last time in the State D6 (defined in § 7.1)	Trace of the Production Process	---.R--.---.---.---
Date when the ActProp entered for the last time in the State D7 (defined in § 7.1)	Trace of the Production Process	---.R--.---.---.---
Date when the ActProp entered in the State D8 (defined in § 7.1)	Trace of the Production Process	---.R--.---.---.---
Date when the ActProp entered in the State D98 or D99 (defined in § 7.1)	Trace of the Production Process	---.R--.---.---.---

(table continued overleaf)

<b>Element of the common fraction of ActProps</b>	<b>Component of the general structure</b>	<b>FMOGI code</b> (relative to the Member author of the Initial Version of the ActProp)
List of the dates of all past transitions between States in the Action Proposal Production Process	Trace of the Production Process	---.R---.---.---.---
Values for the following variables, retained at the start of the current procedure: <i>TValid</i> (Distributed Moderation or DCCPPP), <i>TVote_XXX</i> , (CollDec), <i>MaxTNoSupp</i> (State D6)	Trace of the Production Process	---.R---.---.---.---
Notification of Decision by the Distributed Moderation (NoteDecDMod)	Trace of the Production Process	---.R---.---.---.---
Notification of Decision by the Distributed Control of Compliance with Principles and of Plagiarism Prevention (NotDecDCCPPP)	Trace of the Production Process	---.R---.---.---.---
List of all Notifications of Action Proposal sufficiently supported and of Action Proposal insufficiently supported	Trace of the Production Process	---.R---.---.---.---
Notification of Implementation Decision (NoteImplDec)	Trace of the Production Process	---.R---.---.---.---
Process Stop Notification	Trace of the Production Process	---.R---.---.---.---
Report on Exchange of Arguments and Information (REAI) relative to the Current Version of the ActProp	Trace of the Production Process	cf. § 4.3.4
External Debate Report (ExtDebReport) relative to the Current Version of the ActProp	Trace of the Production Process	cf. § 4.3.5
Structured Feedback on the ActProp	Trace of the Production Process	cf. § 4.3.9
List of all Implementation Status Updates	Trace of the Production Process	cf. § 4.3.10
List of all the FormAmend and of all SubstAmend brought to the Current Version of the ActProp	Trace of the Production Process	cf. § 4.3.6, 4.3.7, 4.5.9 and 4.7.10
List of all AckContribute related to the ActProp	Trace of the Production Process	---.R---.---.---.---
List of all earlier Current Versions (Meta-Data, Content and Justification of the Content)	Trace of the Production Process	R--.R---.---.---.---
List of all Vote Start Notifications for the WkGrp	Trace of the Production Process	---.R---.---.---.---
List of all Collective Decisions taken by the WkGrp	Trace of the Production Process	---.R---.---.---.---
List of all events that changed the composition of the WkGrp related to the ActProp ( <i>see below</i> )	Trace of the Production Process	---.R---.---.---.---
List of all Notifications of Active Working Group and of Inactive Working Group	Trace of the Production Process	---.R---.---.---.---
List of all Notifications of Action Proposal in Debate Mode	Trace of the Production Process	---.R---.---.---.---
Member author of the Initial Version	Trace of the Production Process	R--.R--. ---.---.---
List of Active Participants having brought at least one Contribution to the ActProp	Trace of the Production Process	R--.R---.---.---.---
List of Observers Followers having brought at least one Contribution to the ActProp	Trace of the Production Process	R--.R---.---.---.---

The list of events that changed the composition of the WkGrp contains the list of the following Internal Messages (the Collective Decisions that had an impact on the composition of the WkGrp are treated in the relevant list immediately above):

- all Notifications of Acceptance as an Active Participant in the WkGrp (described in § 4.2.21)
- all Notifications of Acceptance on the Waiting List of the WkGrp (described in § 4.2.23)
- all Acknowledgements of Resignation of an Active Participant from a WkGrp (described in § 4.2.30)
- all Acknowledgements of Resignation from the WkGrp's Waiting List (described in § 4.2.32)
- all Notifications of Eviction of an Active Participant out of the WkGrp (described in § 4.2.33).

#### **4.3.13 Data structure of the Acknowledgement of Vote in a Distributed Moderation (AckVoteDModer)**

The Acknowledgement of Vote in a Distributed Moderation (AckVoteDModer) is automatically generated by the KuneAgi software immediately after a Member in charge issued a Vote for a Distributed Moderation. It is an Authenticated Internal Message sent to the Member who just issued a Vote and containing:

- a copy of the Authenticated Vote (see § 3.4.4) registered by the Infrastructure for this Member in charge of Distributed Moderation
- the information obtained after decoding the Encrypted Digest with the Member's Public Key
- the hash code of the (Vote Informative Content; Current Date) couple received from the user
- the information as whether
  - the Authentication Check (as described in § 3.4.4) is successful (i.e. the hash code computed from decoding the Encrypted Digest and that from the (Informative Content; Current Date) couple match), the Vote is taken into account by the Infrastructure and the Member may not vote again on this Distributed Moderation or
  - the Authentication Check fails, the Vote is being rejected and the Member may attempt again to vote on this Distributed Moderation.

#### **4.3.14 Data structure of the Notification of Decision by the Distributed Moderation (NoteDecDMod)**

The Notification of Decision by the Distributed Moderation (NoteDecDMod) is automatically generated by the KuneAgi software, along the conditions defined in § 7.3. It is an Authenticated Internal Message sent to the Member author of the Initial Version of the Action Proposal (ActProp) that just left the State D1 described in § 7.1 because the Distributed Moderation took a decision by a vote of the *NbDistribModer* Members in charge of the Distributed Moderation, or because the duration has elapsed after which the default value of the vote is attributed.

It contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp that just received a

decision by the Distributed Moderation

- the start date of the vote on Distributed Moderation
- the value of *TValid* at the start of the Distributed Moderation vote
- the Date when the Distributed Moderation decision was taken
- the nature of the decision: Approval (which leads the ActProp into the State D2) or Rejection (which leads the ActProp into the State D99)
- the list of the *NbDistribModer* Members in charge of the Distributed Moderation, and of their Authenticated Votes
- for each negative vote by a Member in charge of the Distributed Moderation, the Justification of his vote, that contains (with the FMOGI Code referring to the Member in charge of the Distributed Moderation that expressed a negative vote):
  - the excerpt of the ActProp text justifying the negative vote (FMOGI = ---.R--.---.---.-W-) (\*)
  - the excerpt of the Moderation Rules to which the text excerpt above is considered as non-compliant (FMOGI = ---.R--.---.---.-W-) (\*)
  - the justification text of the negative vote (FMOGI = ---.R--.---.---.-W-).

All fields marked with an asterisk (\*) are mandatory.

#### **4.3.15 Data structure of the Notification of Action Proposal in Debate Mode (NoteActPropDeb)**

The Notification of Action Proposal in Debate Mode (NoteActPropDeb) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to each Active Participant and to each Observer of the Working Group (WkGrp) that just switched its Mode, and performed a transition towards the State G2 (Action Proposal in Debate Mode) defined in §7.2.

The Notification of Action Proposal in Debate Mode (NoteActPropDeb) contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp whose WkGrp just switched towards the State G2.

#### **4.3.16 Data structure of the Notification of New Amendment (NoteNewAmend)**

The Notification of New Amendment (NoteNewAmend) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to the Active Participants and to the Observers of the Working Group (WkGrp) whose ActProp just received a new Formal Amendment or a new Substantial Amendment.

The Notification of New Amendment (NoteNewAmend) contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp who just received a new Formal Amendment or a new Substantial Amendment
- a hyperlink towards the screen S6 "My Working Groups" related to this ActProp.

#### **4.3.17 Data structure of the Notification of New Version (NoteNewVersion)**

The Notification of New Version (NoteNewVersion) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to the Active Participants and to the Observers of the Working Group (WkGrp) whose ActProp just moved to a new Version, following a Collective Decision of Accepting the Current Version (DCurrVers, defined in

§ 4.2.16).

The Notification of New Version (NoteNewVersion) contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp who just moved to a new Version
- the number of the new Version of the ActProp.

**4.3.18 Data structure of the Acknowledgement of Vote in a Distributed Control of Compliance with Principles and of Plagiarism Prevention (AckVoteDCCPPP)**

The Acknowledgement of Vote in a Distributed Control of Compliance with Principles and of Plagiarism Prevention (AckVoteDCCPPP) is automatically generated by the KuneAgi software immediately after an Member in charge issued a Vote in for a Distributed Control of Compliance with Principles and of Plagiarism Prevention. It is an Authenticated Internal Message sent to the Member who just issued a Vote and containing:

- a copy of the Authenticated Vote (see § 3.4.4) registered by the Infrastructure for this Member in charge of Distributed Control of Compliance with Principles and of Plagiarism Prevention
- the information obtained after decoding the Encrypted Digest with the Member's Public Key
- the hash code of the (Vote Informative Content; Current Date) couple received from the user
- the information as whether
  - the Authentication Check (as described in § 3.4.4) is successful (i.e. the hash code computed from decoding the Encrypted Digest and that from the (Informative Content; Current Date) couple match), the Vote is taken into account by the Infrastructure and the Member may not vote again on this Distributed Control of Compliance with Principles and of Plagiarism Prevention or
  - the Authentication Check fails, the Vote is being rejected and the Member may attempt again to vote on this Distributed Control of Compliance with Principles and of Plagiarism Prevention.

**4.3.19 Data structure of the Notification of Decision by the Distributed Control of Compliance with Principles and of Plagiarism Prevention (NotDecDCCPPP)**

The Notification of Decision by the Distributed Control of Compliance with Principles and of Plagiarism Prevention (NotDecDCCPPP) is automatically generated by the KuneAgi software, along the conditions defined in § 7.3. It is an Authenticated Internal Message sent to each Active Participant and to each Observer of the Working Group (WkGrp) producing the Action Proposal (ActProp) that just left the State D5 described in §7.1) because the Distributed Control of Compliance with Principles and of Plagiarism Prevention (NotDecDCCPPP) took a decision by a vote of the *NbDistribCCPPP* Members in charge, or because the duration has elapsed after which the default value of the vote is attributed.

It contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp that received a decision by the Distributed Control of Compliance with Principles and of Plagiarism Prevention (DCCPPP)
- the start date of the vote on Distributed Control of Compliance with Principles and of

#### Plagiarism Prevention (DCCPPP)

- the value of *TValid* at the start of the vote
- the Date when the Distributed Control of Compliance with Principles and of Plagiarism Prevention (DCCPPP) decision was taken
- the nature of the decision: Approval (which leads the ActProp into the State D6) or Rejection (which leads the ActProp into the State D99)
- the list of the *NbDistribCCPPP* Members in charge of the Distributed Control of Compliance with Principles and of Plagiarism Prevention (DCCPPP), and of their Authenticated Votes.
- for each negative vote by a Member in charge of the Distributed Control of Compliance with Principles and of Plagiarism Prevention (DCCPPP), the Justification of his vote, that contains (with the FMOGI Code referring to the Member in charge of the DCCPPP that expressed a negative vote):
  - the excerpt of the ActProp text justifying the negative vote (FMOGI = ---R--.---.---.-W-) (\*)
  - the excerpt of the Principles to which the text excerpt above is considered as non-compliant (FMOGI = ---R--.---.---.-W-) (+)
  - the Reference Number and the excerpt of the third-party ActProp that the ActProp considered is judged as plagiarising without citing its sources (FMOGI = ---R--.---.---.-W-) (+)
  - the justification text of the negative vote (FMOGI = ---R--.---.---.-W-).

All fields marked with an asterisk (\*) are mandatory. One at least among the fields marked with a cross (+) is mandatory.

#### 4.3.20 Data structure of the Publication Notification (PubNote)

The Publication Notification (PubNote) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to all Members whose Distant Topics of Interest contain the ActProp, as soon as the ActProp switched to the State D6 of the § 7.1 following a positive decision by the DCCPPP. It contains as a minimum:

- the Distant Topic of Interest that caused the sending of the PubNote
- the Reference Number, the Title and the Summary of the ActProp that just switched to State D6
- the current value of *MinNbSupport\_XXX* or of *QuorumSupport\_XXX* (with XXX the acronym of the Action Proposal Category)
- the current value of *MaxTNoSupp*
- the date at which the ActProp will be stopped (State D98) if it does not satisfy the conditions for the transition towards State D7 (given in § 7.3)
- the link to the function "Give my External Support" to this ActProp, described in § 8.2.7.

#### 4.3.21 Data structure of the Notification of Action Proposal Sufficiently Supported (NoteActPropSupported)

The Notification of Action Proposal Sufficiently Supported (NoteActPropSupported) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent



to all Members whose Distant Topics of Interest contain the ActProp, as soon as the ActProp switched to the State D7 of the § 7.1, be it because it received a sufficient number of Support Tokens or because it was selected by the Schulze procedure (according to the Action Proposal Category), as described in the table of § 7.3. It contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp that just switched into the State D7
- the Number of Support Tokens received and the current threshold value *MinNbSupport\_XXX* (with XXX the acronym of the Action Proposal Category) or the number of Schulze Ballots received and the current threshold value *QuorumSupport\_XXX* (with XXX the acronym of the Action Proposal Category) .

#### **4.3.22 Data structure of the Notification of Action Proposal Insufficiently Supported (NoteActPropInsuffSupport)**

The Notification of Action Proposal Insufficiently Supported (NoteActPropInsuffSupport) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to all Members whose Distant Topics of Interest contain the ActProp, as soon as the ActProp switched back to the State D6 of the § 7.1, because its number of Support Tokens or reverted below the threshold *MinNbSupport\_XXX*, as described in the table of § 7.3. It contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp that just switched into State D6
- the current value of *MinNbSupport\_XXX* (with XXX the acronym of the Action Proposal Category)
- the current value of *MxTNoSupp*
- the date at which the ActProp will be stopped (State D98) if it does not satisfy the conditions for the transition towards State D7 (given in § 7.3)
- the current number of Support Tokens received.

#### **4.3.23 Data structure of the Warning for Action Proposal Insufficiently Supported (WarnActPropInsuffSupport)**

The Warning for Action Proposal Insufficiently Supported (WarnActPropInsuffSupport) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to all Members having allocated one Support Token to a ActProp that did not receive a sufficient number of Support Token by Members during too long a period of time. It is an invitation for those Members that expressed their Support Token to this ActProp to incite the Members they know to do the same. The logical conditions for the sending of the Warning for Action Proposal Insufficiently Supported (WarnActPropInsuffSupport) are given in § 9.1.

The Warning for Action Proposal Insufficiently Supported (WarnActPropInsuffSupport) contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp having not received *MinNbSupport\_XXX* Support Tokens
- the current value of *MinNbSupport\_XXX* or of *QuorumSupport\_XXX* (with XXX the acronym of the Action Proposal Category)
- the current value of *MxTNoSupp*
- the date at which the ActProp will be stopped (State D98) if it does not satisfy the conditions for the transition towards State D7 (given in § 7.3)

- the current number of Support Tokens or of Schulze Ballots received.

#### 4.3.24 Data structure of Notification of Implementation Decision (NoteImplDec)

The Notification of Implementation Decision (NoteImplDec) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to all Members whose Distant Topics of Interest contain the ActProp, and to all Members who have allocated a Support Token to the ActProp as soon as an Implementer decided either to promote the ActProp to State D8 "Action Proposal being Implemented" of § 7.1 or to demote it to State D98 "End of Process". It contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp that was the purpose of the Implementation Decision
- the Family Name, Given Name and Official Position of the Implementer who took the Implementation Decision
- **if** the Implementation Decision is positive (i.e. the Action Proposal switched to State D8), **then** its first Implementation Status Update (as described in § 4.3.10), **else** a text explaining the reason why the Action Proposal was refused for Implementation
- the information that the Support Token allocated to this ActProp is available again to the Owner for other ActProps.

#### 4.3.25 Data structure of the Process Stop Notification (ProcStopNote)

The Process Stop Notification (ProcStopNote) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to each Active Participant and to each Observer of the Working Group (WkGrp) for whose ActProp the Production Process is stopped (switch to the State D98 or D99 of the § 7.1).

The Process Stop Notification (ProcStopNote) contains as a minimum:

- the Reference Number, the Title and the Summary of the ActProp whose Production Process of Production is stopped
- the motive of the Production Process stop of the ActProp, among the following:
  - WkGrp Inactive
  - WkGrp Fruitless
  - ActProp insufficiently supported
  - ActProp refused by the Distributed Moderation or by the DCCPPP
- the data justifying why the process stopped for the ActProp:
  - the values of *MaxTInactWkGrp*, of *MaxTNoAgree*, of *MaxTNoSupp* and of *NbMinSupport\_XXX* or of *QuorumSupport\_XXX* (with XXX the acronym of the Action Proposal Category)
  - the last Notification for Inactive Working Group
  - the last Notification of New Version
  - the last Notification of Action Proposal Insufficiently Supported
  - the Notification of (negative) Decision by the DCCPPP or by the Distributed Moderation.

#### 4.3.26 Data structure of the Invitation to Moderate (InvitModer)

The Invitation to Moderate (InvitModer) is automatically generated by the KuneAgi software.

It is an Authenticated Internal Message sent to each of the randomly selected Members asking them to Moderate upon the registration of the ActProp's Initial Version (transition towards the State D1 defined in § 7.1). It contains as a minimum:

- a text explaining the Distributed Moderation procedure
- the link towards the Moderation Rules of the Infrastructure (exposed for example on Screen S91 described in § 8.2.9)
- the Reference Number, the Title and the Summary of the ActProp that just entered the State D1 and therefore submitted to the Distributed Moderation
- the current value of *TValid*
- the date, equal to (Date of entry into the State D1 + *TValid*), after which the Member will be considered to have approved by default the ActProp if he performed no action
- a link towards the screen of Validation of the Human-Machine Interface specific to the Distributed Moderation (DModS) related to this ActProp, and described in § 8.3.2.

#### **4.3.27 Data structure of Invitation to Control the Compliance with Principles and to Prevent Plagiarism (InvitCCPPP)**

The Invitation to Control the Compliance with Principles and to Prevent Plagiarism (InvitCCPPP) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to each of the randomly selected Members to Control the Compliance with Principles and to Prevent Plagiarism, upon of the Collective Decision by the Working Group to Publish the ActProp's Current Version (transition towards the State D5 defined in § 7.1). It contains as a minimum:

- a text explaining the Distributed Control of Compliance with Principles and of Plagiarism Prevention procedure
- the link towards the Principles of the Collective (exposed for example on Screen S92 described in § 8.2.9)
- the Reference Number, the Title and the Summary of the ActProp that just entered the State D5 and therefore submitted to Distributed Control of Compliance with Principles and of Plagiarism Prevention
- the current value of *TValid*
- the date, equal to (Date of entry into the State D5 + *TValid*), after which the Member will be considered to have approved by default the ActProp if he performed no action
- a link towards the screen of Validation of the Human-Machine Interface specific to the Distributed Control of Compliance with Principles and of Plagiarism Prevention (DCCPPPS), related to this ActProp, and described in § 8.3.3.

#### **4.3.28 Data structure of the Notification of Change in the Numeric Constants (NumConstChangeNote)**

The Notification of Change in the Numeric Constants (NumConstChangeNote) is automatically generated by the KuneAgi software. It is an Authenticated Internal Message sent to all Members when a Numeric Constant described in chapter 18 just changed because the median of all values requested by Members changed.

It contains as a minimum:

- the name and explanation of the Numeric Constant, as obtained from chapter 18
- the former value of the Numeric Constant

- the new value of the Numeric Constant
- the list and the number of Members requesting a value equal to that new value
- the list and the number of Members requesting a value strictly inferior to that new value
- the list and the number of Members requesting a value strictly superior to that new value.

#### 4.3.29 Data structure of the Proposal to Improve the KuneAgi software (PropImprove)

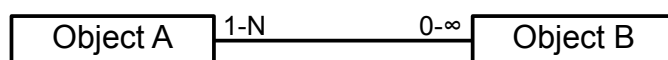
The Proposal to Improve the KuneAgi software (PropImprove) is automatically generated by the KuneAgi software. It is an information sent to the technical person in charge of the technical development and of the maintenance of the KuneAgi software, from the screen S98 of the Human-Machine Interface described in § 8.2.12, for example in the framework of a bug tracking system.

It contains as a minimum:

- the Member or the Follower author of the Proposal to Improve the KuneAgi software (PropImprove)
- the category of PropImprove: (1) bug signalling or (2) proposal to add or modify a function
- the seriousness of the bug: minor, worrisome, serious, blocking
- the reproducibility of the bug: always, sometimes, random, I was unable to reproduce
- the description of the circumstances of appearing of the bug (including browser used, computer, operating system)
- the description of the proposed modification or added function
- the justification of the proposed modification or added function.

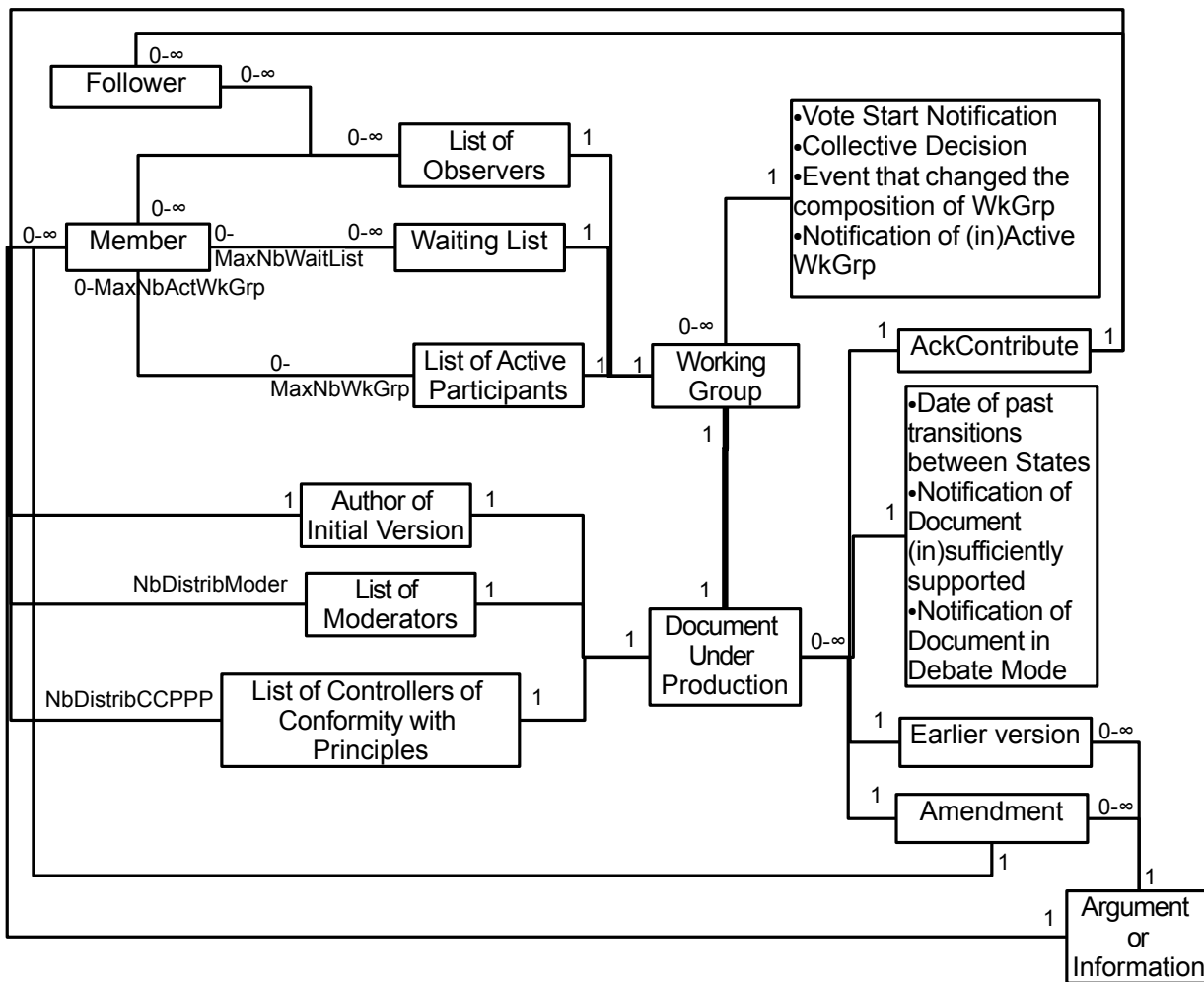
#### 4.4 Relations between generic objects

In this section, the numeric relation between objects is represented with the following convention.



On the link between Object A and Object B, the figure near Object A defines, for each Object A, the number of Objects B that it is connected to (while reciprocally the figure near Object B defines the number of Objects A that each Object B is connected to). In this example, each Object A is connected to at least one Object B, but to no more than N, while each Object B is connected to an unlimited number of Objects A, potentially zero but with no upper limit.

Using this convention, the relations between the objects defined in the KuneAgi software may be represented by the following diagram.



## 4.5 Objects specific to the design of Public Policy Proposals (PPP)

### 4.5.1 List of objects specific to the design of PPP

The objects specific to the design of Public Policy Proposals (PPP) are the following:

- its Action Scale, described in § 4.5.2
- its Geographic Location, described in § 4.5.3
- the Election Category to which it relates, described in § 4.5.4
- the Public Policy Domain to which it relates, described in § 4.5.5
- the Support Tokens, described in §4.5.6
- the Acknowledgement of Support Token Modification, described in § 4.5.7.

### 4.5.2 Data structure of the Action Scale (ActScale)

The Action Scale (ActScale) is an element of the Indexing Meta-Data of the PPP, which describes the **size scale** of the geographic domain where the PPP applies. It may take one, and one only, among the following values:

- the whole world
- the European Union as a whole
- the scale of a Member-State of the European Union

- the scale of the administrative unit of level NUTS-1 (i.e. *Zone Économique d'Aménagement du Territoire* in France, or *Bundesland* in Germany)
- the scale of the administrative unit of level NUTS-2 (i.e. *Région* in France, or *Regierungsbezirk* in Germany)
- the scale of the administrative unit of level NUTS-3 (i.e. *Département* in France, or *Kreis* in Germany)
- the scale of the administrative units of level LAU-1 (i.e. *Communauté de Communes*, *Canton* or *Communauté Urbaine* in France, or *Verwaltungsgemeinschaften* in Germany)
- the scale of the administrative units of level LAU-2 (i.e. *Commune* in France, or *Gemeinde* in Germany)
- the scale of the urban area (within an administrative unit of level LAU-2).

#### 4.5.3 Data structure of the Geographic Location (GeoLoc)

The Geographic Location (GeoLoc) is an element of the Indexing Meta-Data of the PPP, which describes the **identity** of the geographic domain where the PPP applies; when the Action Scale is inferior to "the whole world" and to "the European Union as a whole". The Geographic Location is determined, by successive choices in sets of decreasing size, in the list of geographic units that defined upon initialisation (cf. § 3.10). The Geographic Location may take several of the values in each list. The selection proceeds in descending order of size as follows:

1. choice in the list of Member-States of the European Union, with the country of the language version of the software as default value
2. then in the list of administrative units of level NUTS-1 within those Member States selected
3. then in the list of administrative units of level NUTS-2 within those administrative units of level NUTS-1 selected
4. then in the list of administrative units of level NUTS-3 within those administrative units of level NUTS-2 selected
5. then in the list of administrative units of level LAU-1 within those administrative units of level NUTS-3 selected, starting with the 5 larger in decreasing size order, the others in alphabetical order.
6. then in the list of administrative units of level LAU-2 within those administrative units of level LAU-1 selected, with a free text space to write the name of the unit when it is not part of the scroll-down menu.

Examples of combinations of Action Scales and Geographic Locations:

- in those Member States of the European Union sharing the euro (the euro-zone)
- in all the *Communes* of metropolitan France
- in all *Départements* of the Aquitaine region
- in all urban areas of the Frankfurt *Kreis*
- in the *Gemeinde* of Oldenburg.

#### 4.5.4 Data structure of the Election Category to which the PPP relates

The Election Category to which the the PPP relates may take one or several among the values

defined upon initialisation (cf. § 3.10), and that may be, for example:

- European elections (to the European Parliament)
- Election of the President
- Legislative Elections (to the French *Assemblée Nationale*, to the German *Bundestag*)
- Regional elections (to the various French *Assemblées Régionales* and German *Landtage*)
- Cantonal elections (in France)
- Municipal elections.

#### 4.5.5 Data structure of the Public Policy Domain to which the PPP relates

The Public Policy Domain to which the PPP relates may take one up to at most *MaxNbPPFields* among the values defined upon initialisation (cf. § 3.10), and that may be for example the following, extracted from the policy fields of the European Union<sup>16</sup>, the 34 public Missions<sup>17</sup> defined by the French *Loi Organique relative aux Lois de Finances – LOLF* – and by the list of municipal responsibilities in France.

<b>Public Policy fields</b>
Agriculture, fishing, forestry and rural affairs
Public development aid
Veterans, memory and links with the Nation
Audiovisual and media
Control of State actions
Culture
Defence
Economic development and regulation, Competition
Ecology and sustainable development
Public financial commitments
Primary and secondary education, Early childhood
Green spaces
Management and control of public finance
Town-twinning
Justice
Public freedoms and Security
Overseas territories
Territorial policy
Research and higher education
Social security and pension regimes
Health
Sciences and Technologies
Food and product safety. Consumer protection
Civil protection
Sport, youth and associative life
Solidarity and integration
Economic and monetary strategy
Tourism
Transport & Roads
Work, Employment and Equal opportunities

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<sup>16</sup> [http://ec.europa.eu/policies/index\\_en.htm](http://ec.europa.eu/policies/index_en.htm)

<sup>17</sup> [http://www.minefi.gouv.fr/lolf/5\\_1.htm](http://www.minefi.gouv.fr/lolf/5_1.htm)

#### 4.5.6 Data structure of the Support Token expressed by a Member to a Public Policy Proposal (PPP)

The Support Token expressed by a Member to a Public Policy Proposal (PPP) is defined by:

- the Member, Owner of the Support Token (FMOGI = ---.R--.---.---.---)
- the Member, called the Delegate, in charge of allocating this Support Token to a Public Policy Proposal (FMOGI = ---.R--.---.---.-WM), by delegation from the Owner. The delegation of power to allocate a Support Token is always revertible, which is translated by the Modify right given to the Individual Owner of the Support Token. By default, the Delegate and the Owner of the Support Token are identical
- the Delegation Field, which is a Distant Topic of Interest (as defined in § 4.2.3) and that specifies where the delegated Support Token may be used, if the Delegate is different from the Owner. The default value of the Delegation Field is "unlimited" (i.e. the delegated Support Token may be used for any PPP).
- the Public Policy Proposal (PPP) object of the Support Token, and selected by the Delegate (FMOGI = ---.R--.---.---.-WM), where the Individual in the FMOGI code is the Delegate
- the Type of Support Token chosen by the Delegate (FMOGI = ---.R--.---.---.-WM), where the Individual in the FMOGI code is the Delegate. The Type of Support Token may take one and one only among the following values:
  - "Importance of the issue": the Delegate considers that the issue raised by the PPP is important, but that the proposed solution is insufficient
  - "Quality of the solution": the Delegate considers that the issue raised by the PPP is important, **and** that the proposed solution is of high quality.

The Support Tokens are revertible, and the Delegate may also freely modify the Type of the Support Token that she allocates to a PPP (therefore the Modification right "M" by the Individual in the FMOGI code). If the Delegate identifies over time a PPP that she considers deserves better receiving her Support Token, she may take her Support Token away from a PPP to allocate it to another, or modify the Type of her Support Token.

#### 4.5.7 Data structure of the Acknowledgement of Support Token Modification (AckModifToken)

The Acknowledgement of Support Token Modification (AckModifToken) is automatically generated by the KuneAgi software immediately after an Member modified a Support Token of which she is the Owner or the Delegate. It is an Authenticated Internal Message sent to the Member who just performed this modification and containing a copy of the Authenticated Vote (see § 3.4.4) registered by the Infrastructure for this Member on the change brought on the Support Token.

#### 4.5.8 Data structure of the fraction specific to PPPs of the Action Proposal (ActProp)

The fraction specific to Public Policy Proposals (PPP) of the Action Proposal (ActProp) is defined by the table below. The "component of the general structure" of the ActProp in the table refers to the categories given in §4.3.2.

The observations made in § 4.3.12 apply, regarding the State of the ActProp (in the Action Proposal Production Process described in § 7.1) during which the rights described in the FMOGI code are valid for the Individual (position "I") and for the Working Group.



<b>Element of the fraction specific to the PPP of the ActProp</b>	<b>Component of the general structure</b>	<b>FMOGI code (relative to the Member author of the Initial Version of the PPP)</b>
Action Scale of the PPP	Indexing Meta-Data	R--.R--. ---.--C.-W-
Geographic Location of the PPP	Indexing Meta-Data	R--.R--. ---.--C.-W-
Election Category to which the PPP relates	Indexing Meta-Data	R--.R--. ---.--C.-W-
Public Policy Domain(s) to which the PPP relates*	Indexing Meta-Data	R--.R--. ---.--C.-W-
Nature of the issue to address, of the problem to solve, or desirable state to aim at (text)*	Content of the Current Version	R--.R--. ---.--C.-W-
Justification of the importance of the issue / problem or of the desirability of the state to aim at, as regards the common good or the specific interest of identified actors (text)*	Justification for the Content of the Current Version	R--.R--. ---.--C.-W-
Detailed technical description of the proposed Public Policy, i.e. of the action by a public body aiming at addressing the issue, solving the problem or reaching the desirable state (text)	Content of the Current Version	R--.R--. ---.--C.-W-
Justification of the effectiveness of the Public Policy Proposal: why does it effectively address the issue, / solve the problem / help reaching the desirable state, and why is this effect superior to potential unwanted effects in the opposite direction (text)	Justification for the Content of the Current Version	R--.R--. ---.--C.-W-
Other anticipated positive effects (= in direction of the common good or of specific interests) of the PPP, in addition of addressing the issue / solving the problem, / helping to reach the desirable state, with justification of these effects (text)	Justification for the Content of the Current Version	R--.R--. ---.--C.-W-
Anticipated negative, but accepted, effects of the PPP (= in the direction opposite to the common good or to the specific interests of identified actors) with justification of these effects (text)	Justification for the Content of the Current Version	R--.R--. ---.--C.-W-
Estimation of the nature and of the size of uncertainties on the consequences of the PPP	Justification for the Content of the Current Version	R--.R--. ---.--C.-W-
Justified estimation of budget costs or additional income (spreadsheet file)	Justification for the Content of the Current Version	R--.R--. ---.--C.-W-

Justification of the effectiveness of the Public Policy Proposal: why does it effectively address the issue, / solve the problem / help reaching the desirable state, and why is this effect superior to potential unwanted effects in the opposite direction (text)	Justification for the Content of the Current Version	R--.R--. ---.--C.-W-
Justification of choices made: why this Public Policy Proposal rather than others, why are the budget incomes and anticipated positive effects (problem solving + others) considered as superior to negative effects and budget costs, why act now rather than waiting to collect more information or than letting the situation follow its spontaneous course (text)	Justification for the Content of the Current Version	R--.R--. ---.--C.-W-
Number of Support Tokens received by the PPP, whose Type is "Importance of the Issue"	External Supports received	R--.R--.---.---.---
List of the Support Tokens received by the PPP, whose Type is "Importance of the Issue"	External Supports received	---.R--.---.---.---
Number of Support Tokens received by the PPP, whose Type is "Quality of the Solution"	External Supports received	R--.R--.---.---.---
List of the Support Tokens received by the PPP, whose Type is "Quality of the Solution"	External Supports received	---.R--.---.---.---
List of all Acknowledgements of Support Token Modification relevant to this ActProp	External Supports received	---.R--.---.---.---

\*: These fields are the only ones requested to allow the PPP to be validated, i.e. to move to the State D1: Initial Version of the ActProp validated by the Initial Author

*(The space below is deliberately left blank)*

#### 4.5.9 Data structure of the fraction specific to PPP of the Substantial Amendment (SubstAmend)

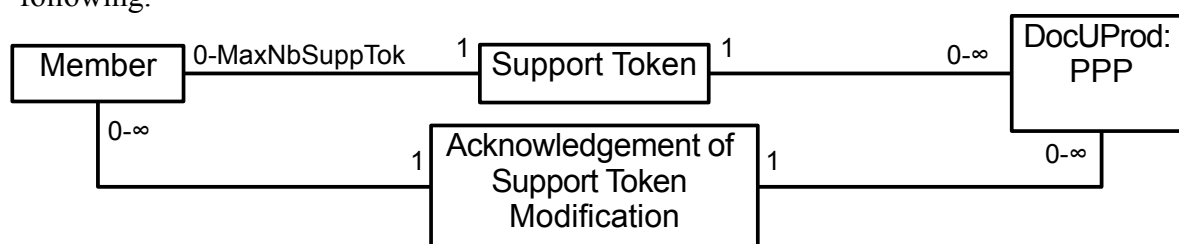
The fraction specific to Public Policy Proposals (PPP) of the Substantial Amendment (SubstAmend) is defined by the table below.

The rights described in the FMOGI code for the Individual (position "I") are relative to the Member author of the SubstAmend.

Element of the fraction specific to the PPP of the SubstAmend	FMOGI code (relative to the Member author of the SubstAmend)
Anticipated positive effects (= in direction of the common good or of specific interests) of the SubstAmend, with justification of these effects (text)	R--.R--.----.-WM
Anticipated negative, but accepted, effects of the SubstAmend (= in the direction opposite to the common good or to the specific interests of identified actors) with justification of these effects (text)	R--.R--.----.-WM
Justification of choices made: why this SubstAmend rather than others, why are the anticipated positive effects considered as superior to negative effects and budget costs (text)	R--.R--.----.-WM
Justified estimation of budget costs or additional income (spreadsheet file)	R--.R--.----.-WM

#### 4.5.10 Relations between objects specific to PPP

Following the convention used in § 4.4, the relations between objects specific to PPPs are the following.



### 4.6 Objects specific to the design of Electoral Programmes of candidate(s) in political elections (ElectProg)

#### 4.6.1 List of objects specific to the design of Electoral Programmes

An Electoral Programme (ElectProg) is the tool through which a Member or a Follower (or a group of Members and Followers, if the political election concerns lists rather than individual candidates) seeks to be officially endorsed by the Collective as its candidate in a political election, in a specific Constituency. It is therefore "a candidacy to become (the official) candidate". Several Members / Followers (or groups of Members / Followers) may compete to become the official candidate of the Collective for a given political election in a given Constituency. The official candidate of the Collective in each Constituency and in each political election is democratically selected by a **Schulze** voting procedure<sup>18</sup>, when several

<sup>18</sup> described at [http://en.wikipedia.org/wiki/Schulze\\_method](http://en.wikipedia.org/wiki/Schulze_method)

Electoral Programmes (and several candidates / lists of candidates) are in competition.

The objects specific to the design of Electoral Programmes of a candidate (or of a list of candidates) in political elections (ElectProg) are the following :

- the Election Category to which the ElectProg relates (described in § 4.6.2)
- the Constituency to which the ElectProg relates (described in § 4.6.3)
- the Schulze Ballots for the selection of the Electoral Programme in the Constituency (described in § 4.6.4)
- the Acknowledgement of Schulze Ballot Modification (described in § 4.6.5)
- the Candidate Designation Processor, using the Schulze voting procedure (described in § 4.6.6).

#### **4.6.2 Data structure of the Election Category**

The list of possible Election Categories to which the ElectProg may relate is identical to that for Public Policy Proposals, provided in § 4.5.4. However, one and one Election Category only may be chosen for a given Electoral Programme.

#### **4.6.3 Data structure of the Constituency**

For each Election Category and each election date, the list of Constituencies is defined by reference to an external official document. The Constituency is made of:

- the character chain reproducing its official name, in the official reference external document
- the hypertext link to this official reference external document, describing the official list of Constituencies and the date of the first day of the first round of the election.

#### **4.6.4 Data structure of the Schulze Ballot allocated by a Member to an Electoral Programme**

The Schulze Ballot expressing the support by a Member to an Electoral Programme is defined by:

- the Member, Owner of the Schulze Ballot (FMOGI = ---R---.---.---)
- the Member, called the Delegate, in charge of allocating this Schulze Ballot in a Candidate Designation Processor (FMOGI = ---R---.---.----WM), by delegation from the Owner. The delegation of power to allocate a Schulze Ballot is always revertible, which is translated by the Modify right given to the Individual Owner of the Support Token. By default, the Delegate and the Owner of the Schulze Ballot are identical
- the Delegation Field, which is a Constituency and that specifies where the delegated Schulze Ballot may be used, if the Delegate is different from the Owner. The default value of the Delegation Field is "unlimited" (i.e. the delegated Schulze Ballot may be used for any Constituency).
- the Candidate Designation Processor to which the Schulze Ballot applies (FMOGI = ---R---.---.----W-). One Schulze Ballot by a given Owner, and one only, may be used in a given Candidate Designation Processor.
- the ordered list of Electoral Programmes that express the preferences of the Delegate of the Schulze Ballot among those in competition in the Candidate Designation Processor (FMOGI = ---R---.---.----WM), where the FMOGI Code refers to the Delegate.

#### 4.6.5 Data structure of the Acknowledgement of Schulze Ballot Modification

The Acknowledgement of Schulze Ballot Modification is automatically generated by the KuneAgi software immediately after an Member modified a Schulze Ballot of which she is the Owner or the Delegate. It is an Authenticated Internal Message sent to the Member who just performed this modification and containing a copy of the Authenticated Vote (see § 3.4.4) registered by the Infrastructure for this Member on the change brought on the Schulze Ballot.

#### 4.6.6 Data structure of the Candidate Designation Processors

One Candidate Designation Processor is created for each triplet (Election Category; Election Date; Constituency), in order to designate democratically the official candidate(s) of the Collective for that triplet.

The triplet is the Indexing Meta-Data of the Candidate Designation Processor.

The Candidate Designation Processor itself is made of:

- the Election Category (FMOGI = ---R--....-W-)
- the Election Date, expressed as the month and the year of the first day of the first round of the election, as published in the official reference external document, e.g. "January 2011" (FMOGI = ---R--....-W-)
- the Constituency (FMOGI = ---R--....-W-)
- the Official Registration Date, date at which the candidates to the political election must officially register (FMOGI = ---R--....-W-)
- the Vote Closing Date, date at which the Candidate Designation Vote will be closed (FMOGI = ---R--....-). The date is automatically computed by the Infrastructure, with  $\text{Vote Closing Date} = \text{Official Registration Date} - T_{\text{OffReg}}$
- the Vote Start Date, date at which the Candidate Designation Vote will start (FMOGI = ---R--....-). The date is automatically computed by the Infrastructure, with  $\text{Vote Start Date} = \text{Vote Closing Date} - T_{\text{VoteCandDesign}}$
- the list of Electoral Programmes (ElectProg) in competition to be officially designated as candidates by the Collective in this Candidate Designation Processor (FMOGI = ---R--....-). This list is automatically created by the Infrastructure by adding Electoral Programmes as soon as they are validated for Publication by their WkGrp and by the Distributed Control of Compliance with Principles and Plagiarism Prevention (DCCPPP), i.e. as soon as they reached the State D6 described in § 7.1
- the number of Schulze Ballots received for this democratic Candidate Designation Processor (FMOGI = ---R--....-).
- the list of Schulze Ballots received for this democratic Candidate Designation Processor (FMOGI = ---W-....-), when the ActProp is in State D6 of § 7.1, which means that the information on the vote situation is not available to Members until the end of the vote procedure, in order to avoid tactical voting; FMOGI = ---R--....-), when the ActProp is in State D7, so that Members can control the electronic voting process *a posteriori*). For each pair (Election Category; Election Date), each Member may vote in a maximum of  $NbVotSupp\_ElectProg$  Constituencies, and therefore has a maximum of  $NbVotSupp\_ElectProg$  Schulze Ballots available
- the Electoral Programme selected at the Vote Closing Date as the winner of the Schulze procedure (FMOGI = ---R--....-). The winner is automatically computed by the Infrastructure.

In this description, the FMOGI code is relative to the Member author of the Initial Version of

the first ElectProg relating to this Candidate Designation Processor.

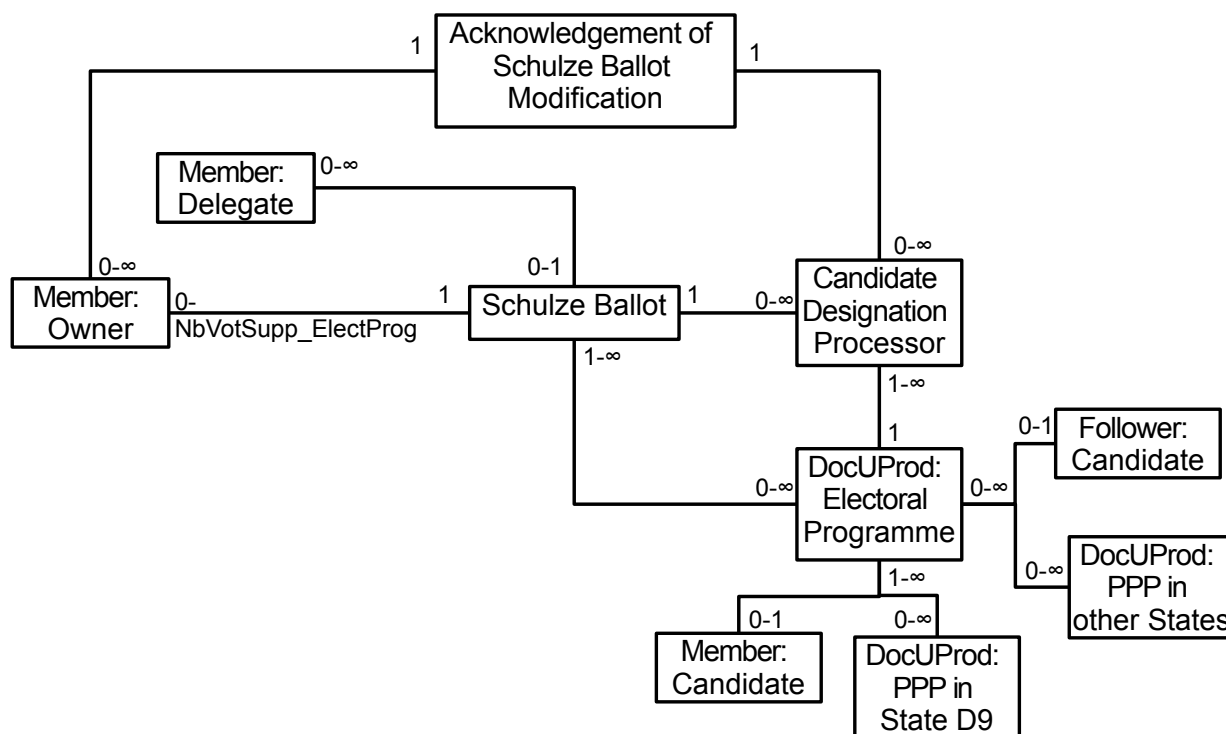
#### 4.6.7 Data structure of the fraction specific to Electoral Programmes of the Action Proposal (ActProp)

The fraction specific to Electoral Programmes (ElectProg) of the Action Proposal (ActProp) is defined by the table below. The observations made in § 4.5.8 apply.

Element of the fraction specific to the ElectProg of the ActProp	Component of the general structure	FMOGI code (relative to the Member author of the Initial Version of the ElectProg)
Candidate Designation Processor to which this ElectProg relates	Indexing Meta-Data	---R--. ---.--W-
Ordered list (in the order of the list presented to voters) of candidate(s) with links towards those candidates that are Members and Followers	Content of the Current Version	---R--. ---.--C.-W-
List of Public Policy Proposals sufficiently supported (= in the State D7 of the § 7.1) considered as of higher priority by the candidate(s), and he (they) commit(s) to support in case of election	Content of the Current Version	---R--. ---.--C.-W-
List of the other Public Policy Proposals considered as of higher priority by the candidate(s), and he (they) commit(s) to support in case of election	Content of the Current Version	---R--. ---.--C.-W-
Justification of the proposed political programme = of the list of Public Policy Proposals considered as of higher priority	Justification for the Content of the Current Version	---R--. ---.--C.-W-
Planned alliances for the first election round	Content of the Current Version	---R--. ---.--C.-W-
Planned alliances for the second election round	Content of the Current Version	---R--. ---.--C.-W-
Excluded second round alliances	Content of the Current Version	---R--. ---.--C.-W-
Justification of the proposed alliance strategy = of the list of planned and excluded alliances	Justification for the Content of the Current Version	---R--. ---.--C.-W-
Electoral document to be distributed to voters	Content of the Current Version	---.--. ---R-C.-W-

#### 4.6.8 Relations between objects specific to Electoral Programmes

Following the convention used in § 4.4, the relations between objects specific to Electoral Programmes are the following.



## 4.7 Objects specific to the design of Investment Proposals (InvestProp)

### 4.7.1 List of objects specific to the design of Investment Proposals

Investment Proposals are proposals for a firm or an organisation to engage in a temporary expenditure of resources, in order to achieve a longer-term goal (investment), or to relinquish assets considered as obsolete (dis-investment). They may also be used as a tool to solve specific problems (in which case the long-term goal is to have the problem solved).

The objects specific to the design of Investment Proposals (InvestProp) are the following :

- its Investment Category, described in § 4.7.2
- its Geographic Action Scale, described in § 4.7.3
- its Geographic Location, described in § 4.7.4
- its Functional Action Scale, described in § 4.7.5
- the Functional Domain where it applies, described in § 4.7.6
- its Operational Action Scale, described in § 4.7.7
- the Business Unit where it applies, described in § 4.7.8
- the Support Tokens, identical to those of Public Policy Proposals, and that are described in §4.5.6
- the Acknowledgement of Support Token Modification, identical to those of Public Policy Proposals, and that are described in § 4.5.7.

### 4.7.2 Data structure of the Investment Category (InvestCat)

The Investment Category (InvestCat) is an element of the InvestProp's Indexing Meta-Data. It may take one or several among the following values, the list of which is to be selected upon initialisation (§ 3.10) to adapt to the nature of the firm or the organisation (and particularly to non-profit organisations):

- development of a new product, of a new offering (material or immaterial)
- development of a new manufacturing process, of a new internal management process
- commercial investigation of a new market, of a new category of customers
- merger with or acquisition of a firm
- training
- recruitment of competencies
- acquisition of licence or of (often external) know-how
- early-stage Research & Development, acquisition of generic scientific or technical knowledge
- management and organisational consultancy
- legal counsel
- communication or advertising campaign
- material equipment
- software
- real estate.

This Investment Category may be applied to an external transaction or to an internal development, and may be the purpose of an investment or of a dis-investment action.

#### **4.7.3 Data structure of the Geographic Action Scale (GeoActScale)**

The Geographic Action Scale (GeoActScale) is an element of the InvestProp's Indexing Meta-Data, which describes the **scale of size** of the **geographic** unit where the InvestProp applies. It may take one, and one only, among the following values:

- the firm or or the organisation as a whole
- scale of the geographic units of rank 2 (the way how geographic units of rank 2 are designated in the firm or the organisation are generally specific to it, and are specified upon initialisation as described in § 3.10. These geographic units of rank 2 typically describe the large markets relevant for the firm, such as continents or groups of continents for multinational firms, for example: Americas, Europe-Middle East -Africa, Asia-Oceania, often with a specific category for the historic geographic market of the firm)
- scale of the geographic units of rank 3 (same observation as above)
- scale of the geographic units of rank 4 (same observation as above)
- scale of the geographic units of rank 5 (same observation as above)

#### **4.7.4 Data structure of the Geographic Location (GeoLoc)**

The Geographic Location (GeoLoc) is an element of the InvestProp's Indexing Meta-Data that describes the **identity** of the geographic unit where the investment (or the dis-investment) is considered; when the Geographic Action Scale is inferior to "the firm or or the organisation as a whole". The Geographic Location is determined by the selection of one or several geographic units, in the lists of geographic units of decreasing size.



#### 4.7.5 Data structure of the Functional Action Scale (FunctActScale)

The Functional Action Scale (FunctActScale) is an element of the InvestProp's Indexing Meta-Data, which describes the **scale of size** of the **functional** unit where the InvestProp applies. It may take one, and one only, among the following values:

- the firm or or the organisation as a whole
- scale of the functional units of rank 2 (the way how functional units of rank 2 are designated in the firm or the organisation are generally specific to it, and are specified upon initialisation as described in § 3.10. These functional units of rank 2 typically describe the large functions of the firm, such a Manufacturing, Sales, Provisioning, Research & Development, Marketing, Accounting & Finance, Human Resources, etc..
- scale of the functional units of rank 3 (same observation as above)
- scale of the functional units of rank 4 (same observation as above)
- scale of the functional units of rank 5 (same observation as above)

#### 4.7.6 Data structure of the Functional Domain (FunctDom)

The Functional Domain (FunctDom) is an element of the InvestProp's Indexing Meta-Data that describes the **identity** of the functional unit where the investment (or the dis-investment) is considered; when the Functional Action Scale is inferior to "the firm or or the organisation as a whole". The Functional Domain is determined by the selection of one or several functional units, in the lists of functional units of decreasing size.

#### 4.7.7 Data structure of the Operational Action Scale (OperActScale)

The Operational Action Scale (OperActScale) is an element of the InvestProp's Indexing Meta-Data, which describes the **scale of size** of the **operational** unit (often called a Business Unit) where the InvestProp applies. It may take one, and one only, among the following values:

- the firm or or the organisation as a whole
- scale of the operational units of rank 2 (the way how operational units of rank 2 are designated in the firm or the organisation are generally specific to it, and are specified upon initialisation as described in § 3.10. These operational units of rank 2 typically describe the large product-market couples of the firm. For example at Alstom, they are called "*métiers*" and are "Electricity production" and "Rail transport".
- scale of the operational units of rank 3 (same observation as above)
- scale of the operational units of rank 4 (same observation as above)
- scale of the operational units of rank 5 (same observation as above)

#### 4.7.8 Data structure of the Operational Domain (OperDom)

The Operational Domain (OperDom) is an element of the InvestProp's Indexing Meta-Data that describes the **identity** of the Operational Unit, or "*Business Unit*", where the investment (or the dis-investment) is considered; when the Operational Action Scale is inferior to "the firm or or the organisation as a whole". The Operational Domain is determined by the selection of one or several operational units, in the lists of operational units of decreasing size

#### 4.7.9 Data structure of the fraction specific to InvestProps of the Action Proposal (ActProp)

The fraction specific to Investment Proposals (InvestProp) of the Action Proposal (ActProp) is defined by the table below. The observations made in § 4.5.8 apply.

<b>Element of the fraction specific to the InvestProp of the ActProp</b>	<b>Component of the general structure</b>	<b>FMOGI code</b> (relative to the Member author of the Initial Version of the PPP)
Investment Category of the InvestProp	Indexing Meta-Data	R--. R--. ---.--C.-W-
Geographic Action Scale of the InvestProp	Indexing Meta-Data	R--. R--. ---.--C.-W-
Geographic Location where the InvestProp applies	Indexing Meta-Data	R--. R--. ---.--C.-W-
Functional Action Scale of the InvestProp	Indexing Meta-Data	R--. R--. ---.--C.-W-
Functional Domain where the InvestProp applies	Indexing Meta-Data	R--. R--. ---.--C.-W-
Operational Action Scale of the InvestProp	Indexing Meta-Data	R--. R--. ---.--C.-W-
Business Unit where the InvestProp applies	Indexing Meta-Data	R--. R--. ---.--C.-W-
Nature of the problem to solve or desirable state to aim at (text)	Content of the Current Version	R--.R--. ---.--C.-W-
Justification of the importance of the problem to solve or of the desirability of the state to reach, in reference to the firm's common good or of the specific interests of identified actors (text)	Justification for the Content of the Current Version	R--.R--. ---.--C.-W-
Detailed technical description of the proposed investment or dis-investment, or of the action performed by the firm or the organisation, aiming at solving the problem or at reaching the desirable state (text)	Content of the Current Version	R--.R--. ---.--C.-W-
Justification of the effectiveness of the Investment Proposal: why does it solve the problem / help at reaching the desirable state, and why are these effects superior to potential negative ones (text)	Justification for the Content of the Current Version	R--.R--. ---.--C.-W-
Anticipated, but accepted, negative effects of the InvestProp (= in the direction opposite to the firm's or the organisation's common good or of the specific interests of identified actors), with justification of these effects (text)	Justification for the Content of the Current Version	R--.R--. ---.--C.-W-

*(Table continued overleaf)*

<b>Element of the fraction specific to the InvestProp of the ActProp</b>	<b>Component of the general structure</b>	<b>FMOGI code</b> (relative to the Member author of the Initial Version of the PPP)
Anticipated calendar of the cash flows generated by the InvestProp, justified and split by nature (spreadsheet file)	Content of the Current Version	R--.R--. ---.--C.-W-
Sources of data for the computation of the cash flows generated by the InvestProp (text)	Justification for the Content of the Current Version	R--.R--. ---.--C.-W-
Computation of the financial profitability of the InvestProp, using the calendar of cash flows (spreadsheet file)	Content of the Current Version	R--.R--. ---.--C.-W-
Justification of the actualisation rate used for the computation of the financial profitability of the InvestProp (text)	Justification for the Content of the Current Version	R--.R--. ---.--C.-W-
Estimation of the nature and of the magnitude of risks and uncertainties on the consequences and financial profitability of the InvestProp (text)	Justification for the Content of the Current Version	R--.R--. ---.--C.-W-
Justification of choices made: why this Investment Proposal rather than others, why are the anticipated positive effects (problem solving + others) considered as superior to negative effects, why act now rather than waiting to collect more information or than letting the situation follow its spontaneous course (text)	Justification for the Content of the Current Version	R--.R--. ---.--C.-W-
Number of Support Tokens received by the InvestProp of Type "Importance of the Issue"	External Supports received	R--.R--.---.---.---
List of the Support Tokens received by the InvestProp, whose Type is "Importance of the Issue"	External Supports received	---.R--.---.---.---
Number of Support Tokens received by the InvestProp of Type "Quality of the Solution"	External Supports received	R--.R--.---.---.---
List of the Support Tokens received by the InvestProp, whose Type is "Quality of the Solution"	External Supports received	---.R--.---.---.---
List of all Acknowledgements of Support Token Modification relevant to this ActProp	External Supports received	---.R--.---.---.---

#### **4.7.10 Data structure of the fraction specific to InvestProps of the Substantial Amendment (SubstAmend)**

The fraction specific to Investment Proposals (InvestProp) of the Substantial Amendment (SubstAmend) is defined by the table below.

<b>Element of the fraction specific to the InvestProp of the SubstAmend</b>	<b>FMOGI code</b> (relative to the Member author of the SubstAmend)
Anticipated positive effects of the SubstAmend (= in direction of the common good, of corporate profitability or of specific interests) of the SubstAmend, with justification of these effects (text)	R--R--....-WM
Anticipated negative, but accepted, effects of the SubstAmend (= in the direction opposite to the common good, of corporate profitability, or to the specific interests of identified actors) with justification of these effects (text)	R--R--....-WM
Justification of choices made: why this SubstAmend rather than others, why are the anticipated positive effects considered as superior to negative effects (text)	R--R--....-WM
Justified calendar of cash flows generated by the SubstAmend, by difference with the Current Version of the InvestProp (spreadsheet file)	R--R--....-WM

#### 4.7.11 Relations between objects specific to InvestProp

The relations between objects specific to Investment Proposals are identical to those for PPP defined in § 4.5.10.

## 5 Processes relevant for Natural Persons

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The present chapter describes the processes concerning the Natural Persons:

- their Distributed Authentication, assuring that each Member is indeed a real person, and that a given person may only register once as a Member in the Infrastructure
- the Distributed White Pages aiming at giving robustness to the network of Authenticated Natural Persons.

### 5.1 Distributed Authentication of Natural Persons and finite states automaton

This paragraph describes Distributed Authentication procedure, and finite states automaton that supports it: the States in which a Natural Person may be, and the conditions of transition between these States.

#### 5.1.1 Possible States of a Natural Person

At any moment in time, a Natural Person is in one, and one only, among the following States:

- Nothing. The Natural Person does not exist for the Infrastructure.
- State A0: The Natural Person registered in the Infrastructure (and therefore expressed his desire to join the Collective), by providing the Data Required for the Distributed Authentication, specified in § 5.1.2 below.
- State A1: The Natural Person has been authenticated by the majority of *NbDistribAuth* Natural Persons mobilised for the Distributed Authentication. A Member with the full rights described in the present specification (registration in a Working Group as an Active Participant, creation of a ActProp, allocation of External Support or of a Schulze Ballot, etc...) is only created after the Natural Person behind the Member reached the State A1.
- State A9: The Natural Person left the Infrastructure (and therefore the Collective), or his Distributed Authentication failed, for a duration inferior to *TQuarantine*.

The aim of the *TQuarantine* duration is to avoid that a Member who acquired a bad reputation (i.e. bad marks for his Technical work or his Co-operative Behaviour, as described in § 4.2.3) may find an intact reputation by resigning and registering again instantaneously. This duration also assures the confidentiality of personal data of former Natural Persons, by ensuring that they are erased after a finite duration.

#### 5.1.2 Data required for the Distributed Authentication

The Data Required for the Distributed Authentication of a new Natural Person is the following:

- her e-mail address
- her Given Name
- her Family Name
- her Full Date of Birth: day, month and year
- her Official Position in the organisation
- her status as an Implementer of the Action Proposal in the organisation. The default value of this variable is FALSE.

### 5.1.3 Conditions for the transition between the States of a Natural Person

In the table below, the values of *NbDistribAuth*, *TAuthent* and *TDecAuthent* used in the calculations are those valid at the start of the Authentication procedure.

Initial State	Final State	Condition to fulfil to perform the transition from the initial State to the final State
-	A0	The Natural Person registers by providing the data listed in § 5.1.2 above.
A0	A1	{[(Current Date – Date of entry into the State A0) $\geq$ ( <i>TAuthent</i> + <i>TDecAuthent</i> ) or All Natural Persons in charge of the Distributed Authentication expressed their vote] and the Natural Person was authenticated by the majority of <i>NbDistribAuth</i> Natural Persons mobilised for the Distributed Authentication and No Natural Person is present in the database with the same triplet (Family Name; Given Name; Date of Birth)} <b>or</b> <i>DistribAuthent</i> = FALSE
A0	A9	<i>DistribAuthent</i> = TRUE <b>and</b> {[(Current Date – Date of entry into the State A0) $\geq$ ( <i>TAuthent</i> + <i>TDecAuthent</i> ) or All Natural Persons in charge of the Distributed Authentication expressed their vote] and The Natural Person was not authenticated by the majority of <i>NbDistribAuth</i> Natural Persons mobilised for the Distributed Authentication} or There is at least one Natural Person in the database with the same triplet (Family Name; Given Name; Date of Birth)}
A1	A9	The Natural Person resigned from the Infrastructure using the functions of Screen SNP2 presented in § 8.2.14
A9	-	(Current Date – Date of entry into the State A9) is superior or equal to <i>TQuarantine</i>

(the space below is deliberately left blank)

### 5.1.4 Actions performed by the KuneAgi software upon of the transition between some States of a Natural Person

Initial State	Final State	Actions performed by the KuneAgi software upon of the transition from the initial State to the final State
-	A0	<p><b>If</b> [no Natural Person is present in the database with the same triplet (Family Name; Given Name; Date of Birth) <b>and</b> <i>DistribAuthent</i> = TRUE]</p> <p><b>then</b></p> <ol style="list-style-type: none"> <li>1. Select randomly the <i>NbDistribAuth</i> Natural Persons in the State A1 in charge of the Distributed Authentication of this new Natural Person</li> <li>2. Send an Invitation to Authenticate (defined in § 4.2.5) to these Natural Persons</li> <li>3. Send an Invitation to Justify one's Identity (defined in § 4.2.4) to the potential new Natural Person</li> </ol>
A0	A1	<p>Send a Welcome Notification (defined in § 4.2.7) to the new Natural Person</p> <p>Integrate the new Natural Person in the Distributed White Pages, along the procedure defined in § 5.2.1</p> <p>Create a new, empty Member, with a randomly-generated, provisional, single-use Pseudonym + Password set and an expiry Date = Current Date + <i>TRegister</i>.</p>
A0	A9	Send a Notification of Authentication Refusal (defined in § 4.2.8) to the potential new Natural Person
A1	A9	<p>Take the resigning Natural Person out of the Distributed White Pages, along the procedure defined in § 5.2.2</p> <p>Send an Acknowledgement of Resignation (defined in § 4.2.11) to the resigning Natural Person</p>
A9	-	<p>Erase the Nominative Data of the former Natural Person from the database</p> <p>Send an Erasure Notification (defined in § 4.2.15) to the former Natural Person</p>

## 5.2 Distributed White Pages

The Distributed White Pages assure the robustness and the sustainability of the network of Natural Persons, independently of the physical state of the Infrastructure, while preserving the security and confidentiality of nominative data by fractioning them.

In this system, each Natural Person is responsible for *NbDistribWP* other Natural Persons, called Corresponding Natural Persons, to which she can, if desired, send or forward information aimed at all Natural Persons. She is reciprocally the Corresponding Natural Person of *NbDistribWP* distinct Natural Persons, her Upstream Natural Persons. The Infrastructure allocates automatically to each Natural Person her Corresponding Natural Persons, in the framework of the Distributed White Pages, along the automated process described below.

### 5.2.1 Actions performed by the Infrastructure upon of the entry of a new Natural Person

When a new Natural Person is Authenticated, i.e. enters State A1 defined above in § 5.1.1, the Infrastructure performs automatically the following operations:

- select randomly *NbDistribWP* Corresponding Natural Persons for this new Natural Person
- send to the new Natural Person a Distributed White Pages Update (defined in § 4.2.36) containing this list of Corresponding Natural Persons
- for each of these Corresponding Natural Persons:
  - for each Upstream Natural Person of these Corresponding Natural Persons, replace the former Corresponding Natural Person by the new Natural Person

- send to all Upstream Natural Persons a Distributed White Pages Update (defined in § 4.2.36) taking into account this substitution
- register the new Natural Person as Upstream Natural Person, in substitution of the former one.

### 5.2.2 Actions performed by the Infrastructure upon the departure of a Natural Person

When a Natural Person leaves the Infrastructure (and therefore the Collective) by resignation, i.e. performs the transition between States A1 and A9 defined above in § 5.1.1, the Infrastructure performs automatically the following operations:

- generated a random permutation  $P$  on the set  $\{1 \dots NbDistribWP\}$
- for each Corresponding Natural Person of the Natural Person leaving the Infrastructure, numbered  $i$ , with  $i \in \{1 \dots NbDistribWP\}$ , replace the Natural Person leaving the Infrastructure by its Upstream Natural Person numbered  $P(i)$
- for each Upstream Natural Person of the Natural Person leaving the Infrastructure, numbered  $i$ , with  $i \in \{1 \dots NbDistribWP\}$ , replace the Natural Person leaving the Infrastructure by its Corresponding Natural Person numbered  $P^{-1}(i)$
- send to all Upstream Natural Persons of the Natural Person leaving the Infrastructure a Distributed White Pages Update (defined in § 4.2.36) taking into account this substitution.

### 5.2.3 Actions performed by the Infrastructure upon an increment of *NbDistribWP*

When the value of *NbDistribWP* is incremented by a value of  $2N$  (with  $N$  an integer, because *NbDistribWP* can only take odd values), the Infrastructure performs automatically the following operations:

- for each Natural Person in the database in State A1:
  - select randomly  $2N$  Corresponding Natural Persons among the Natural Persons in State A1 other than himself and the existing Corresponding Natural Persons
  - for each of these  $2N$  new Corresponding Natural Person, update the database by adding this new Upstream Natural Person
- send to all Natural Persons a Distributed White Pages Update (defined in § 4.2.36) containing the complete updated list of their Corresponding Natural Persons.

### 5.2.4 Actions performed by the Infrastructure upon a decrement of *NbDistribWP*

When the value of *NbDistribWP* is decremented by a value of  $2N$  (with  $N$  an integer, because *NbDistribWP* can only take odd values), the Infrastructure performs automatically the following operations:

- for each Natural Person in the database in State A1:
  - suppress randomly  $2N$  Corresponding Natural Persons among her Corresponding Natural Persons
  - for each of these suppressed  $2N$  Corresponding Natural Person, update the database by adding the Natural Person from the list of their Upstream Natural Persons
- send to all Natural Persons a Distributed White Pages Update (defined in § 4.2.36) containing the complete updated list of their Corresponding Natural Persons.



### 5.3 Periodic Clean-Up of the database of Natural Persons

Despite the efforts made to convince a person who just resigned as a Member to also resign as a Natural Person (cf. § 4.2.11), there is no means to do this automatically, because of the deliberate break of any link between the Member and the Natural Person, which is a fundamental design option of the KuneAgi software. There is however a need to keep the database of Natural Persons as close as possible to the list of those really active, in order specifically for the Distributed Authentication (§ 5.1) and Distributed White Pages (§ 5.2) procedures to be effective (a Natural Person needs to be active to perform the tasks being requested). The procedure described hereafter provides a means to achieve that goal.

If the duration since the date when the last Periodic Clean-Up took place is superior to *TPeriodCleanUp*, the Infrastructure automatically generates a Request to Update as a Natural Person (cf. § 4.2.37) and sends it to all Members.

If the duration since the date at which the Infrastructure sent the last Request to Update as a Natural Person is superior to *TEvictNaturalPerson*, and if the Natural Person did not in between provide the Update Code on Screen SNP 4 (cf. § 8.2.14), this Natural Person is placed in State A9, and the procedure described in § 5.2.2 is performed, extracting him from the Distributed White Pages, as if he had explicitly resigned.

## 6 Management of Members

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When the access to the KuneAgi Infrastructure must be restricted to only those Natural Persons that belong to a given organisation (e.g. a firm, an association, a trade union), the following procedures apply to ensure that only these Natural Persons may act as Members in the Infrastructure.

### 6.1 Common Access Password to the Infrastructure

If the Infrastructure is accessible only over a network to which access already is restricted to those belonging to the organisation (e.g. a private corporate network), the present paragraph (§ 6.1) does not apply.

If on the other hand the Infrastructure is accessible over a publicly accessible network (e.g. the Internet), the Infrastructure automatically and periodically generates a Common Access Password. The duration of validity of a given Common Access Password, and after which a new one needs to be generated, is noted as  $T_{ValidCAPW}$ .

The date at which the new Common Access Password is generated is noted as  $T_{capw}$ .

Once generated, the Common Access Password is distributed confidentially to all Natural Persons currently belonging to the organisation, using the organisation's internal transmission means. This information is legally considered as a corporate confidential information, and its dissemination outside of the organisation is consequently unlawful, and subject to sanctions (both penal and internal to the organisation – e.g. dismissal).

At a date equal to  $T_{capw} + T_{TransmitCAPW}$ , the new Common Access Password becomes active, and the Login Screen S00 (cf. § 8.2.1) only is accessible if the user enters this newly valid Common Access Password on a dedicated window.

### 6.2 Automatic eviction of a Member from the Infrastructure

If the duration since the date when a Member logged into the Infrastructure for the last time is superior to  $T_{EvictMember}$ , the Member is erased from the Infrastructure.

### 6.3 Logic of Composition Control in a Working Group

The conditions for a Member to become an Active Member of a given Working Group depend upon its Composition Control Mode, according to the table below. The list of possible Composition Control Modes is given in § 4.2.17.

In all cases, a Member applies to become an Active Participant in a Working Group by using the application function described in § 8.2.5, and is first placed on the Waiting List of the Working Group, in chronological order of registration. The Waiting List operates in a First In – First Out (Fifo) mode.

In all cases, the number of Active Participants in a given Working Group may not exceed  $MaxNbWkGrp$ . Therefore, a Member may only become a new Active Participant in the WkGrp if the following condition is met, in addition to the conditions described in the table below:

$$\text{current number of Active Participants in the Working Group} < MaxNbWkGrp$$

In all cases, a Member loses the status of Active Participant in the Working Group if either one of the following conditions are met:

- the Member resigned from the Working Group by using the Resignation function described in § 8.2.6
- **or** the Member was automatically evicted from the Working Group for lack of activity,

following the procedure described in § 9.2 and after having received a Warning for Inactive Member in the Working Group (described in § 4.2.26).

In all cases, a Member is erased from the Waiting List of the Working Group if he resigned from the Working Group's Waiting List by using the Resignation function described in § 8.2.6.

<b>Collective Control Mode</b>	<b>Condition for the Member to become an Active Participant</b>	<b>Condition for the Member to lose the status of Active Participant</b>
Freedom (Free)	the Member is the first on the Waiting List	none
<i>A priori</i> Control (APrioCont)	the Member is accepted following a positive DAcceptMember Collective Decision by the existing Active Participants in the WkGrp	none
<i>A posteriori</i> Control (APostCont):	the Member is the first on the Waiting List	the Member is excluded following a positive DExcluMember Collective Decision by the other Active Participants in the WkGrp
Double Control (DoubleCont):	the Member is accepted following a positive DAcceptMember Collective Decision by the existing Active Participants in the WkGrp	the Member is excluded following a positive DExcluMember Collective Decision by the other Active Participants in the WkGrp

## 7 Action Proposal Production Process and finite state automaton

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The present chapter describes the Action Proposal Production Process. It describes the States that an Action Proposal (ActProp) may take, and the conditions of transition between these States, along the general logic of a finite state automaton.

### 7.1 Possible States of an Action Proposal (ActProp)

An Action Proposal (ActProp) is at any time in one and one only of the following States:

- Nothing. The ActProp does not exist.
- State D0: Initial Version of the ActProp was started and is still being written by the Member who is the Initial Author (\*)
- State D1: Initial Version of the ActProp validated by the Initial Author
- State D2: Initial Version of the ActProp validated by the Distributed Moderation, the Working Group is Inactive
- State D3: Working Group (WkGrp) Active in "Debate" Mode (\*)
- State D4: Working Group (WkGrp) Active in "Decision on Amendments" Mode (\*)
- State D5: ActProp validated for Publication by the Working Group (WkGrp)
- State D6: ActProp validated by the Distributed Control of Compliance with Principles and of Plagiarism Prevention (DCCPPP)
- State D7: ActProp supported by a sufficient number of Support Tokens or by the Schulze Procedure
- State D8: ActProp is being Implemented. It is archived and may be consulted and commented by any Member or Follower. Its status may be updated by any Implementer.
- State D98 : The Action Proposal Production Process is irrevocably stopped. The ActProp is archived and may still be consulted on line by any Member or any Follower.
- State D99 : The Action Proposal Production Process is irrevocably stopped. The ActProp is archived but may be consulted on line by Members only.

The ActProp is modifiable only when it is in one of the States marked with an asterisk (\*) in the list above.

### 7.2 Possible States of a Working Group (WkGrp)

A Working Group (WkGrp) is at any time in one and one only of the following States:

- State G0: Nothing. The Working Group (WkGrp) does not exist. It is logically equivalent to the States D0 and D1 of the ActProp
- State G1: The Working Group (WkGrp) exists, but is Inactive. It is logically equivalent to the State D2 of the ActProp
- State G2: The Working Group (WkGrp) is Active in "Debate" Mode. It is logically equivalent to the State D3 of the ActProp
- State G3: The Working Group (WkGrp) is Active in "Decision on Amendments" Mode. It is logically equivalent to the State D4 of the ActProp

- State G9: The Working Group (WkGrp) is dissolved because its work on the ActProp is finished. It is logically equivalent to the States D5, D6, D7, D8, D98 and D99 of the ActProp.

### 7.3 Conditions of the transition between the States of a ActProp

In this table, the values of the Numeric Constants are taken at the start of the procedure where they are used:

- *TValid* retains the value it had at the start of the Distributed Moderation or of the Distributed Control of Conformity with Principles and of Plagiarism Prevention procedure
- *TVote\_XXX* retains the value it had at the start of the Collective Decision procedure
- *MaxTNoSupp* retains the value it had at the entry in State D6.

Initial State	Final State	Condition to fulfil to perform the transition from the initial State to the final State
	D0	The Member author of the Initial Version of the ActProp registered the first draft
D0	D1	The Member author of the Initial Version of the ActProp filled all mandatory fields <b>and</b> submitted the ActProp to the Distributed Moderation
D1	D99	The simple majority of the votes expressed by the Members in charge of the Distributed Moderation rejected the ActProp <b>and</b> [(Current Date - Date of entry into the State D1) $\geq$ <i>TValid</i> <b>or</b> a simple majority of the <i>NbDistribModer</i> Members in charge of the Distributed Moderation expressed their vote]
D1	D2	The simple majority of the votes expressed by the Members in charge of the Distributed Moderation validated the ActProp <b>and</b> [(Current Date - Date of entry into the State D1) $\geq$ <i>TValid</i> <b>or</b> a simple majority of the <i>NbDistribModer</i> Members in charge of the Distributed Moderation expressed their vote]
D2	D3	The number of Active Participants of the Working Group (WkGrp) is superior or equal to <i>MinNbWkGrp_XXX</i> (with XXX the acronym of the Action Proposal Category)
D3,D4	D2	The number of Active Participants of the Working Group (WkGrp) is strictly inferior to <i>MinNbWkGrp_XXX</i> (with XXX the acronym of the Action Proposal Category)
D2	D98	(Current Date – Date of last entry into the State D2) $\geq$ <i>MaxTInactWkGrp</i>
D3,D4	D98	(Current Date – Date of last entry into the State D3) $\geq$ <i>MaxTNoAgree</i>
D3	D4	The Working Group (WkGrp) took the Collective Decision to switch in "Decision on Amendments" Mode
D4	D3	(Current Date – Date of last entry into the State D4) $\geq$ <i>TVote_XXX</i> (with XXX the acronym of the Action Proposal Category) <b>or</b> [ <b>For all</b> Amendments, the number of Active Participants having expressed their vote is sufficient to determine the outcome of the Collective Decision DAmend]
D3	D5	The Working Group (WkGrp) took the Collective Decision to Publish the Current Version of the ActProp
D5	D99	The simple majority of the votes expressed by the Members in charge of the Distributed Control of Compliance with Principles and of Plagiarism Prevention for this ActProp rejected the ActProp <b>and</b> [(Current Date - Date of entry into the State D5) $\geq$ <i>TValid</i> <b>or</b> a simple majority of the <i>NbDistribCCPPP</i> Members in charge of theDCCPPP expressed their vote]

(Table continued overleaf)

Initial State	Final State	Condition to fulfil to perform the transition from the initial State to the final State
D5	D6	The simple majority of the votes expressed by the Members in charge of the Distributed Control of Compliance with Principles and of Plagiarism Prevention for this ActProp validated the ActProp <b>and</b> [(Current Date - Date of entry into the State D5) $\geq TValid$ <b>or</b> a simple majority of the <i>NbDistribCCPPP</i> Members in charge of theDCCPPP expressed their vote]
D6	D98	[(Action Proposal Category = PPP <b>or</b> InvestProp) <b>and</b> (Current Date – Date of last entry into the State D6) is superior or equal to <i>MaxTNoSupp</i> ] <b>or</b> [(Action Proposal Category = ElectProg) <b>and</b> Current Date $\geq$ Vote Closing Date <b>and</b> (the ActProp lost the Schulze Selection Procedure <b>or</b> Number of Schulze Ballots received $< QuorumSupport\_XXX$ , with XXX the acronym of the Action Proposal Category)]
D7	D8	An Implementer has taken a positive Decision to Implement the Action Proposal, using Screen SNP5 described in § 8.2.14
D7	D98	An Implementer has taken a negative Decision to Implement the Action Proposal, using Screen SNP5 described in § 8.2.14
D7	D6	(Action Proposal Category = PPP <b>or</b> InvestProp) <b>and</b> Number of Support Tokens of Type "Quality of the solution" received by the ActProp $< MinNbSupport\_XXX$ , with XXX the acronym of the Action Proposal Category

#### 7.4 Actions preformed by the KuneAgi software upon of the transition between some States of a ActProp

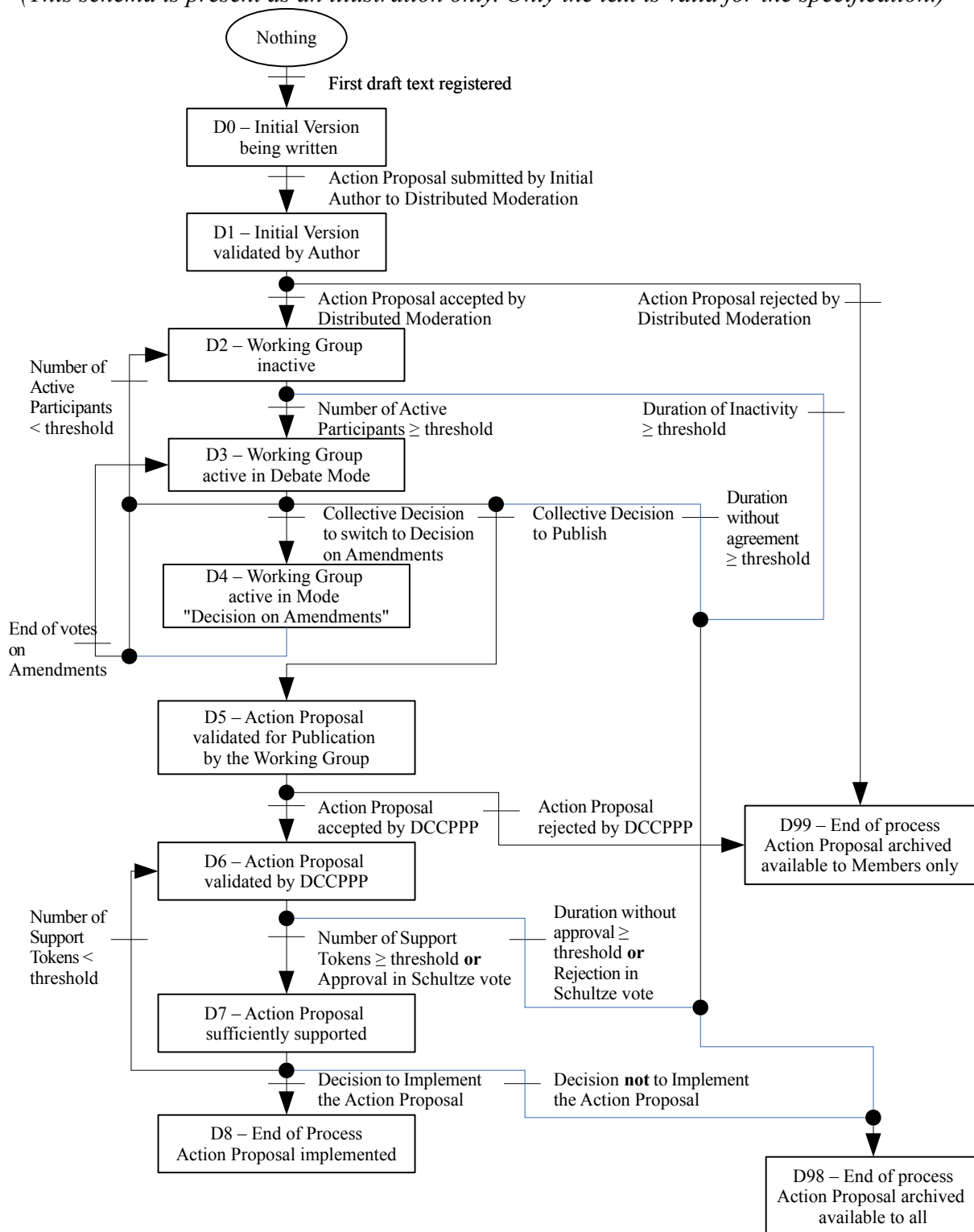
All transitions between States of the ActProp are stored in the Trace of Production Process, with the date when it took place.

Initial State	Final State	Actions performed by the KuneAgi software upon of the transition from the initial State to the final State
D0	D1	Random selection of the <i>NbDistribModer</i> Members in charge of the Distributed Moderation for this ActProp Sending of an Invitation to Moderate (InvitModer) to these Members
D1	D2	Storage in the Trace of Production Process of the Decision by the Distributed Moderation Creation of the Working Group Sending of a (positive) NoteDecDMod to the Member author of the Initial Version Sending of a NewActPropNote to all Members and Followers whose Close Topics of Interest match with the Indexing Meta-Data of the ActProp
D1	D99	Storage in the Trace of Production Process of the Decision by the Distributed Moderation Sending of a (negative) NoteDecDMod to the Aauthor of the Initial Version
D2	D3	Sending of a Notification of Active Working Group (NoteActWkGrp) to all Active Participants and Observers of the Working Group
D3,D4	D2	Sending of a Notification of Inactive Working Group (NoteInactWkGrp) to all Active Participants and Observers of the Working Group
D2,D3 D6	D98	Sending of a Process Stop Notification (ProcStopNote) to all Active Participants and Observers of the Working Group Sending of an Invitation to Evaluate (InvitEval) to all Active Participants of the Working Group Dissolution of the Working Group

Initial State	Final State	Actions performed by the KuneAgi software upon of the transition from the initial State to the final State
D3	D4	Storage in the Trace of Production Process of the Collective Decision to switch in Mode "Decision on Amendments" Sending of a Vote Start Notification (VoteStartNote) to all Active Participants of the Working Group where the Collective Decision is a DAmend
D4	D3	Storage in the Trace of Production Process of all Collective Decisions taken on Amendments during State D4 Addition of the Current Version to the list of earlier Versions of the ActProp Incrementation by 1 of the Version Number of the ActProp Incorporation of all Approved SubstAmend and FormAmend to the Current Version of the ActProp Erasure of all Rejected SubAmend and FormAmend Reinitialisation of the REAI, of the ExtDebReport, and of the list of SubstAmend and FormAmend Update of the Date when the Current Version was Accepted $\leq$ Current Date Sending of a Notification of Action Proposal in Debate Mode (NoteActPropDeb) to all Active Participants and Observers of the Working Group
D3	D5	Storage in the Trace of Production Process of the CollDec to Publish the ActProp Random selection of the <i>NbDistribCCPPP</i> Members in charge of the Distributed Control of Compliance with Principles and of Plagiarism Prevention for this ActProp Sending of an Invitation to Control the Compliance with Principles and to Prevent Plagiarism (InvitCCPPP) to these Members
D5	D6	Storage in the Trace of Production Process of the Decision by the DCCPPP Sending of a (positive) Notification of Decision by the Distributed Control of Compliance with Principles and of Plagiarism Prevention (NotDecCCPPP) to all Active Participants and Observers of the Working Group Dissolution of the Working Group Sending of a Publication Notification of the Action Proposal (PubNote) to all Members and Followers whose Distant Topics of Interest match with the Indexing Meta-Data of the ActProp Sending of an Invitation to Evaluate (InvitEval) to all Active Participants of the WkGrp
D5	D99	Storage in the Trace of Production Process of the Decision by the DCCPPP Sending of a (negative) Notification of Decision by the Distributed Control of Compliance with Principles and of Plagiarism Prevention (NotDecCCPPP) to all Active Participants of the Working Group Sending of an Invitation to Evaluate (InvitEval) to all Active Participants of the Working Group Dissolution of the Working Group
D6	D7	Sending of a Notification of Action Proposal Sufficiently Supported (NoteActPropSupported) to all Members and Followers whose Distant Topics of Interest match with the Indexing Meta-Data of the ActProp
D7	D8	Sending of a (positive) Notification of Implementation Decision (NoteImplDec) to all Members and Followers whose Distant Topics of Interest match with the Indexing Meta-Data of the ActProp and to all Members and Followers who gave a Support Token to the ActProp. All Support Tokens allocated to this ActProp are made available to their respective Owners.
D7	D98	Sending of a (negative) Notification of Implementation Decision (NoteImplDec) to all Members and Followers whose Distant Topics of Interest match with the Indexing Meta-Data of the ActProp and to all Members and Followers who gave a Support Token to the ActProp. All Support Tokens allocated to this ActProp are made available to their respective Owners.
D7	D6	Sending of a Notification of Action Proposal Insufficiently Supported (NoteActPropInsuffSupp) to all Members and Followers who gave a Support Token to the ActProp

### 7.5 Finite State automaton schema

(This schema is present as an illustration only. Only the text is valid for the specification.)





### 7.6 Default values of Working Group parameters, according to Action Proposal Category

Action Proposal Category	Parameter of the Working Group	Default value
Public Policy Proposal (PPP)	Collective Decision Mode (ColDecisionMode)	Qualified Majority (QualifMaj)
	Composition Control Mode (CompControlMode)	Double Control (DoubleCont)
Electoral Programme for the designation of candidates in political elections (ElectProg)	Collective Decision Mode (ColDecisionMode)	Qualified Majority (QualifMaj)
	Composition Control Mode (CompControlMode)	Double Control (DoubleCont)
Investment Proposal (InvestProp)	Collective Decision Mode (ColDecisionMode)	Simple Majority (SimpleMaj)
	Composition Control Mode (CompControlMode)	A Posteriori Control (APostCont)

## 7.7 Process of Collective Decisions

### 7.7.1 Input

The result of a Collective Decisions is computed by taking as input the Expressed Votes by the Active Participants of the WkGrp at the end of the duration allocated to the Collective Decision, defined in § 7.7.3. The Expressed Votes are the valid Votes (i.e. where the Authentication Check described in § 3.4.4 is successful) expressing Approval and the valid Votes expressing Rejection. The possible values for the Vote of a given Active Participant are given in § 4.2.16.

The Active Participants having voting right in the Collective Decision depend upon the Category of the Collective Decision:

- all Categories **except** DExcluMember: all Active Participants in the WkGrp
- DExcluMember (Decision to exclude an Active Participant from a Working Group): all Active Participants in the WkGrp **except** the Active Member being proposed to be excluded from the Working Group.

### 7.7.2 Processing

The logic computing the result of the Collective Decision depends as follows upon the Collective Decision Mode (ColDecisionMode) whose list is given in § 4.2.16:

- **Consensus:** The Collective Decision is approved (= the result of the Collective Decision is an Approval) if the last Active Participant (in chronological order of Votes) who expressed a Vote did so in the direction of Approval.
- **Simple Majority** (SimpleMaj): The Collective Decision is approved if the simple majority (the half + 1 vote) of Expressed Votes are Approval Votes.
- **Qualified Majority** (QualifMaj): The Collective Decision is approved if a fraction superior or equal to *QualifMajThresh* of Expressed Votes are Approval Votes, **and** if the number of Expressed Votes is superior or equal to a quorum equal to the fraction *QuorumVote* of the total number of Active Participants in the WkGrp.
- **Unanimity** (Unanim): The Collective Decision is approved if the Votes of all Active Participants in the Working Group are Approval Votes.

For all Collective Decision Modes, the result of the Collective Decision is negative (= is a Rejection) if the conditions for an Approval described above are not met.

*(the rest of the page is deliberately left blank)*

## 7.7.3 Calendar of events

Category of the Collective Decision <i>(list identical to that of § 4.2.16)</i>	Start Date of the Collective Decision procedure = $T_0$	End Date of the Collective Decision procedure
<b>DAcceptMember</b> - Decision to accept a Member on the Waiting List of a Working Group (WkGrp) as a new Active Participant in this WkGrp <i>(Case when the CompControlMode = APrioCont or DoubleCont)</i>	Proposal of Collective Decision formulated by an Active Participant in the WkGrp	$T_0 + TVote\_XXX$
<b>DExcluMember</b> - Decision to exclude an Active Participant from a Working Group <i>(Case when the CompControlMode = APostCont or DoubleCont)</i>		
<b>DBlackList</b> – Decision to place a Member or a Follower on the WkGrp's Black List		
<b>DModifCorres</b> - Decision to modify the Corresponding Member of the WkGrp		
<b>DModifCollDecMode</b> - Decision to modify the Collective Decision Mode of the WkGrp		
<b>DModifCompContMode</b> - Decision to modify the Composition Control Mode of the WkGrp		
<b>DSwDecision</b> - Decision to switch the WkGrp to "Decision on Amendments" Mode (i.e. into State G3 of § 7.2)		
<b>DPubli</b> - Decision to Publish the Final Version of the ActProp		
<b>DAmend</b> - Decision to Accept or to Reject a Formal Amendment (FormAmend) or a Substantial Amendment (SubstAmend)	Entry in the State G3 "Decision on Amendments" of the WkGrp	

XXX is the acronym of the Action Proposal Category (defined in § 4.3.3)

$TVote\_XXX$  retains throughout the Collective Decision procedure the value it had at the start.

## **8 Functions accessible on the Human-Machine Interface**

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In the whole chapter, the Screens marked with an asterisk (\*) are accessible to Members only.

### **8.1 Visualisation of main objects**

In all forms appearing on a screen, an appropriate system transmits to the user the information whether she may or not modify either of the fields.

Fields that are not accessible in reading (for which the Reading right "R" is not available to that user) are fully masked. The content is invisible to the user, as well as the very existence of the field.

The lists of Members and Followers are available as scroll-down lists.

#### **8.1.1 Visualisation of an Action Proposal**

A ActProp may be presented in the form of a Complete Presentation or of an Abridged Presentation.

The Abridged Presentation of the ActProp contains the following data, described in § 4.3.12:

- the Reference Number of the ActProp
- its Title
- its Summary
- its Current State in the Action Proposal Production Process
- the Number of Support Tokens received, displayed according to the Visualisation Options of the Follower or of the Member (described in § 4.2.1).

The Complete Presentation of a ActProp is a form containing the information presented in § 4.3.12 (for the common part) and in § 4.5.8 4.6.7, and 4.7.9 (for the part specific to each Action Proposal Category), for all information other than the Trace of the Production Process.

The following elements, part of the Trace of the Production Process, are accessible in the Complete Presentation of the ActProp, each by a dedicated hypertext link:

- the Member author of the Initial Version
- the list of Active Participants having brought at least one Contribution au ActProp
- the Report on Exchange of Arguments and Information (REAI) relative to the Current Version of the ActProp
- the list of all FormAmend and SubstAmend brought to the Current Version of the ActProp, as a scroll-down list
- the rest of the Trace of the Production Process (rather at the end of the form).

#### **8.1.2 Visualisation of a Substantial Amendment**

A SubstAmend is presented as a form containing the information presented in § 4.3.7 (for the common part) and in § 4.5.9 and 4.7.10 (for the part specific to each Action Proposal Category).

#### **8.1.3 Visualisation of Working Groups**

A WkGrp may be presented in the form of a Complete Presentation or of an Abridged Presentation.

The Abridged Presentation of the WkGrp contains:

- the Abridged Presentation of the attached ActProp
- its Collective Decision Mode (ColDecisionMode)
- its Composition Control Mode (CompControlMode)
- the number of its Active Participants
- the number of its Observers.

The Complete Presentation of a WkGrp is a form containing the information presented in § 4.2.17.

### 8.1.4 Visualisation of Topics of Interest

A Topic of Interest is visualised as a list containing:

- the Name of the Topic of Interest
- the option between Close and Distant Topics of Interest
- a search form bearing on the information specified in § 4.2.1 for the Close Topics of Interest and on those specified in § 4.2.3 for Distant Topics of Interest
- the Visualisation Options described in § 4.2.1
- a button to execute the search, which leads to a screen S51 of Search Result.

## 8.2 List of screens

### 8.2.1 Screens before the Login

The first screen of KuneAgi's Human-Machine Interface is the Login Screen S00 for the Member, the Natural Person or the Follower. This Login Screen is only accessible after the user provided the currently valid Common Access Password (cf. § 6.1), if this feature is implemented.

Upon success of the authentication of the couple (Pseudonym; Password) for Members or Followers or of the triplet (Family Name; Given Name; Password) for Natural Persons, the Login Screen S00 gives access to the session and to Welcome Screen S1 (for Members and Followers) described in § 8.2.2 to 8.2.13, or SNP1 (for Natural Persons), described in § 8.2.14.

The Login Screen S00 also gives access to General Information Screens on the Infrastructure's operations mode:

- GIS1: General description of the operations principles of the KuneAgi software (reproducing for example the usage scenarios of chap. 2)
- GIS2: Principles of the Collective
- GIS3: Moderation Rules
- GIS4: Authentication management
  - Access to third-party, free software usable on any platform (i.e. written in Java, for example), to simplify installation and operation. This software should (in one or several packages): (1) generate key-pairs for an asymmetrical encryption scheme; (2) generate the hash code from any text file; (3) check the coherence between a text file, the public key of the sender and the encrypted hash code sent alongside the text file and public key for authentication.
  - Public Key of the Infrastructure.

- GIS5: Purchase a Time Credit Increment
- GIS6: the Registration Screen.

The screen GIS5 "Purchase a Time Credit Increment" gives access to an on-line purchasing platform with credit card payment, and proposes the following options:

<b>Time Credit Increment</b>	<b>Price</b>
3 months	<i>Price3Months</i>
6 months	<i>Price6Months</i>
12 months	<i>Price12Months</i>
24 months	<i>Price24Months</i>

Once the user has purchased a Time Credit Increment, she receives a single-use code, to be used in her Member Account, in the screen S11 "Increment my Time Credit" (§ 8.2.11).

The Registration Screen GIS6 contains :

- a button to choose to Register as a Member or as a Follower (with a brief description of the meaning of these two concepts)
- if the choice is "Follower", a form requesting a pseudonym, a password (with a request to repeat), and a valid e-mail address. The Infrastructure provides a help regarding the security level of the chosen password.
- if the choice is "Member", a form requesting the information necessary for the Distributed Authentication (see § 5.1.2).

### **8.2.2 Screens of the main menu after the Login for the Member or the Follower**

The first level screens of KuneAgi's Human-Machine Interface, and that build its main menu once the session for a Member or a Follower is open, are the following :

- S0: "Quit the session"
- S1: "Welcome" = the first screen after Login, which provides information on the functions present on the other Screens and potentially on recent news about the life and operations of the Collective, such as the list of the latest ActProps that reached State D7 of the Action Proposal Production Process described in § 7.1
- S2: "My Profile" = the Follower or the Member writes and modifies the fields of his profile, described in § 4.2.1 and 4.2.3. He can also resign from the Infrastructure (and therefore from the Collective) on this screen.
- S3: "Start the Production of an Action Proposal" (\*), described in § 8.2.3
- S4: "My Topics of Interest", described in § 8.2.4
- S5: "Search a Working Group or an Action Proposal", described in § 8.2.5
- S6: "My Working Groups", described in § 8.2.6
- S7: "My External Supports" (\*), described in § 8.2.7
- S8: " Hall of Fame", described in § 8.2.8
- S9: "Internal operating rules", described in § 8.2.9
- S10: "My Internal Messaging", described in § 8.2.10

- S11: "Renew my Time Credit", described in § 8.2.11
- S98: "Proposal to improve the KuneAgi software", described in § 8.2.12
- S99: "On-line help", described in § 8.2.13.

The screens S0, S1, S2, S98 and S99 give access to no screen of lower level.

The screens of the main menu are accessible at any time during the navigation.

### **8.2.3 Functions available on the screen S3 "Start the Production of an Action Proposal"**

The Screen S3 gives access to the Screen S31: "Create and save the Initial Version of a new Action Proposal" that contains a blank Complete Presentation of a ActProp (as described in § 8.1.1), a button to save the ActProp once its first version was edited, and a button to cancel the edition of this new ActProp and to come back to Screen S3.

The Screen S3 contains the list of all ActProp currently being written in their Initial Version by the Member (= in the State D0 of the Process defined in § 7.1), in Abridged Presentation.

For each ActProp in the list, the Screen S3 gives access to the following functions:

- S32: Modify the ActProp. The ActProp being edited is displayed in Complete Presentation. After edition of the ActProp in the Screen S32, the KuneAgi software gives the possibility to save the new Initial Version of the ActProp and a direct access to the Screen S34 below
- S33: Visualise the ActProp (with no modification possibility) in Complete Presentation. The Screen S33 contains a direct access to the Screen S34 below.
- S34 : Submit the ActProp to the Distributed Moderation (= bring the ActProp in the State D1 of the Action Proposal Production Process defined in § 7.1). This function is active only if the Member is Active Participant in a number of Working Groups strictly inferior to *MaxNbActWkGrp*.
- S39: Suppress the ActProp.

### **8.2.4 Functions available on the screen S4 "My Topics of Interest"**

The Screen S4 gives access to the Screen S41 : "Create and save a new Topic of Interest" that contains a blank Topic of Interest (as described in § 8.1.4), a button to save the Topic of Interest once its first version was edited, and a button to cancel the edition of this new Topic of Interest and to come back to Screen S4.

The Screen S4 contains the list of Names of all Topics of Interest of the Member or of the Follower.

For each Topic of Interest in the list, the Screen S4 gives access to the following functions :

- S42: Modify the Topic of Interest. The Topic of Interest is displayed in the complete form described in § 8.1.4. After edition of the Topic of Interest in the Screen S42, the KuneAgi software gives the possibility to save the new version of the Topic of Interest
- S43: Visualise the Topic of Interest in the complete form described in § 8.1.4.
- S44: Execute the search according to the Topic of Interest
- S49: Suppress the Topic of Interest.

### **8.2.5 Functions available on the screen S5 "Search a Working Group or an Action Proposal"**

The Screen S5 contains a blank Topic of Interest form, a button to execute the search and a

button to save the Topic of Interest.

Once the search implied by the Topic of Interest is executed, the Screen S51 contains:

- the Search Result of this Topic of Interest, that is the list of all WkGrp, all Candidate Designation Processors matching the query, in Abridged Presentation, presented along the Visualisation Options wished by the Follower or the Member (and described in § 4.2.1),
- for each Candidate Designation Processor matching the query, the list of all Electoral Programmes related to this Candidate Designation Processor, in Abridged Presentation
- the function F51 "Save the Topic of Interest", that saves the Topic of Interest that was just executed in the list of the Follower's or the Member's Topics of Interest, after asking for a Name if none was provided.

For each WkGrp in the Search Result, the Screen S51 gives access to the following functions:

- Register as an Active Participant in the selected Working Group (\*), if the WkGrp is in the States G1 to G5 of § 7.2
- Register as an Observer in the selected Working Group, if the WkGrp is in the States G1 to G5 of § 7.2
- Add an information or an argument to the External Debate Report (ExtDebReport) of the ActProp
- Give, Modify or Suppress a Support Token or a Schulze Ballot to the ActProp (according to its Action Proposal Category), as described hereafter for the Screen S7 in § 8.2.7(\*)
- Send an Internal Message to the Corresponding Member of the Work Group, to all its Active Participants, to all its Observers, or to all Members that allocated a Support Token to the ActProp that it produced (\*)
- Create a new Action Proposal from the selected Action Proposal (= Create the Initial Version of a ActProp by duplicating an existing ActProp), with switch towards the screen S32 "Modify and save my Action Proposals". The List of Active Participants having brought a Contribution to the earlier ActProp is copied and cannot be edited (\*)
- Download the selected Action Proposal in editable text format (limited to *NbMaxDownload* times per day), with the Indexing Meta-Data, the Content of the Current Version and the Justification for the Content of the Current Version of the selected Action Proposal being authenticated by the encrypted hash code and the Infrastructure's Public Key (\*)
- Download the Indexing Meta-Data, the Content of the Current Version and the Justification for the Content of the Current Version of the selected Action Proposal, in non-editable format (e.g. PDF), authenticated by the encrypted hash code and the Infrastructure's Public Key.

On this screen, the number of Support Tokens that remain available to the Member is reminded, as well as the number of Support Tokens already allocated and the total number available (i.e. *MaxNbSuppTok*).

In order to limit the number of downloads to *NbMaxDownload* per day, the following procedure is performed.

Each time a Member requests the download of an Action Proposal (ActProp), the Current Date is compared to that of the oldest download, stored at the place *NbMaxDownload* in his list. If the date of the oldest download stored in his list is equal to the Current Date, the download is



blocked.

Each time the download of a ActProp is performed successfully:

1. the date at which the previous downloads were performed are moved one step in the list
2. the date of the oldest download is discarded
3. the date of the most recent download, the first in the list, is set to the Current Date.

### 8.2.6 Functions available on the screen S6 "My Working Groups"

The Screen S6 "My Working Groups" contains the list of Working Groups where the Member is an Active Participant, where he is on the Waiting List or of which he is an Observer. When the user is a Follower, it only displays those Working Groups where the Follower is an Observer. The Screen S6 therefore presents three lists of Working Groups for the Member, and one only for the Follower. The functions available for each WkGrp of these lists are described hereafter.

For each Working Group (WkGrp) of which the Member is an **Active Participant**, the Screen S6 gives access to the following functions, that are activated according to the State of the WkGrp (as defined in §7.2).

Functions available	State of the WkGrp		
	G1	G2	G3
<b>Create</b> and <b>Modify</b> a Formal Amendment (FormAmend ) or a Substantial Amendment (SubstAmend)		X	
<b>Add</b> an information or an argument to a Report on Exchange of Arguments and Information (REAI)		X	X
<b>Add</b> an information or an argument to an External Debate Report (ExtDebReport)		X	X
<b>Display</b> the list of all current Collective Decision procedures (= for which the Current Date is between the start date and the end date of the Collective Decision)		X	X
<b>Vote</b> in the Collective Decision to accept a Member of the Waiting List as a new Active Participant in the WkGrp - DAcceptMember	X	X	X
<b>Propose</b> the Collective Decision to Exclude an Active Participant from the Working Group - DExcluMember		X	X
<b>Vote</b> in the Collective Decision to Exclude an Active Participant from the Working Group - DExcluMember		X	X
<b>Propose</b> the Collective Decision to place a Member or a Follower on the WkGrp's Black List - DBlackList	X	X	X
<b>Vote</b> in the Collective Decision to place a Member or a Follower on the WkGrp's Black List - DBlackList	X	X	X
<b>Propose</b> the Collective Decision to modify the Collective Decision Mode of the WkGrp - DModifCollDecMode	X	X	X
<b>Vote</b> in the Collective Decision to modify the Collective Decision Mode of the WkGrp - DModifCollDecMode	X	X	X
<b>Propose</b> the Collective Decision to modify the Composition Control Mode of the WkGrp - DModifCompContMode	X	X	X
<b>Vote</b> in the Collective Decision to modify the Composition Control Mode of the WkGrp - DModifCompContMode	X	X	X
<b>Propose</b> the Collective Decision to switch the WkGrp into "Decision on Amendments" Mode (i.e. State G3 of § 7.2) - DSwDec		X	

<b>Vote</b> in the Collective Decision to Accept or to Reject a Formal Amendment (FormAmend) or a Substantial Amendment (SubstAmend) - DAmend			X
<b>Propose</b> the Collective Decision to Publish the Final Version of the ActProp - DPubli		X	
<b>Vote</b> in the Collective Decision to Publish the Final Version of the ActProp - DPubli		X	
<b>Resign</b> from the role of Active Participant in the WkGrp	X	X	X

For each Working Group (WkGrp) where the Member is on **Waiting List**, the Screen S6 gives access to the following functions:

- Resign from the Waiting List of the WkGrp, whatever the State of the WkGrp.

For each Working Group (WkGrp) where the Member or the Follower is an **Observer**, the Screen S6 gives access to the following functions:

- Add an information or an argument to an External Debate Report (ExtDebReport). This function is active only if the WkGrp is in the States G2, G3, G4 or G5
- Resign from the role of Observer in the WkGrp, whatever the State of the WkGrp.

### 8.2.7 Functions available on the screen S7 "My External Supports"

The Screen S7 contains the list of all Support Tokens and all Schulze Ballots owned or managed by the Member.

For each Support Token **managed** by the Member (be it because the Member is the Owner of the Support Token or because she is Delegate for it), the Screen S7 gives access to the following functions:

- Modify the Type of the Support Token
- Take away the Support Token from the ActProp
- Delegate the Support Token to another Member.

For each Support Token **owned** by the Member, the Screen S7 gives access to the following functions:

- Modify the Member to which the Support Token is Delegated
- Modify the Delegation Field
- Take away the Delegation (= the new Delegate is the Member owning the Support Token).

For each Schulze Ballot **managed** by the Member (be it because the Member is the Owner of the Schulze Ballot or because she is Delegate for it), the Screen S7 gives access to the following functions:

- Access to all Electoral Programmes of the same Candidate Designation Processor or to all Public Declarations of the same Declaration Selection Processor
- Modify the Schulze Ballot
- Erase the Schulze Ballot.

On this screen, the number of Support Tokens that remain available to the Member is reminded, as well as the number of Support Tokens already allocated, the number of those being Delegated and the total available number (i.e. *MaxNbSuppTok*).

### 8.2.8 Functions available on the screen S8 "Hall of Fame"

The Screen S8 "Hall of Fame" presents a Topic of Interest form, with an option to display "all Action Proposals" and a selection between "Members" and "Action Proposals".

When "Action Proposals" is selected, the result shows all ActProps in State D7, ranked in decreasing order of Support Tokens received or in decreasing order of Date in which they accessed State D7 (according to whether the Nature of the Action Proposal entails Support Tokens or Schulze Ballots as External Supports, respectively).

When "Members" is selected, the result shows all Members that are Active Participants in the WkGrp appearing as results of this search, with the following display options:

- ranked in decreasing order of Technical Appreciation Mark or of Co-operative Behaviour Appreciation Mark (total mark or mean mark)
- ranked in decreasing order of number of Contributions, of number of Substantial Amendments or of number of Initial Versions of ActProp.

### 8.2.9 Functions available on the screen S9 "Internal operating rules"

The screen S9 gives access to the following sub-screens:

- S91: screen of Moderation Rules
- S92: screen containing the Principles of the Collective
- S93: screen of Usage Recommendations given in chap. 17
- S94: screen reminding the principles of the Creative Commons licence being used (§ 3.5)
- S95: screen of Numeric Constants (presented in chap. 18) specific to this Infrastructure. The current value of the Numeric Constant (equal to the median value of the values expressed by all Members) and the value expressed by the Member are displayed. For each Numeric Constant in the table, the Member may express his preference for another value of the Constant. All Numeric Constants are strictly positive and all (with the exception of *QualifMajThresh* and *QuorumVote*) are integers. The constraints on the acceptable values for some of these Numeric Constants are provided in the table below.

Name of the Numeric Constant	Constraint on the acceptable values for the Numeric Constant
NbDistribAuth	odd number $\geq 3$
NbDistribWP	
NbDistribModer	
NbDistribCCPPP	
MaxTInactMb	$\text{MaxTInactMb} \geq \text{TWarning} + 1$
TWarning	
MaxTNoAgree	$\text{MaxTNoAgree} \geq \text{TWarning} + \text{TVote\_XXX} + 1$
TWarning	
TVote_XXX	
TDecCurrVers_XXX	
MaxTInactWkGrp	$\text{MaxTInactWkGrp} \geq \text{TWarning} + \text{TVote\_XXX} +$

TWarning	1
TVote_XXX	
MaxTNoSupp	$\text{MaxTNoSupp} \geq \text{TWarning} + 1$
TWarning	

The screen S9 also contains the link to **download** the **complete database** of the Infrastructure (with the exception of the database of Natural Persons defined in § 4.2.2 that is stored in a separate, non-downloadable database). This function is accessible for Members only. The fact that this download is open to all Members increases the robustness of the Infrastructure, by allowing its duplication at any time, and therefore both its safe storage and the capacity to restart its operation in case the services of the initial Infrastructure happen to be interrupted.

The screen S9 contains the link to **download** the **source code** of the KuneAgi software and its **compiled form**, with their hash codes, accessible to all Members and Followers, following the terms of the GNU-Affero GPL licence. Each file is accompanied with a link to the official web site of the KuneAgi software, where the hash codes of the official versions of the software being implemented are also displayed, so that all Members may check by themselves that the software being used in the Infrastructure is indeed the one developed and compiled by the KuneAgi development team.

### 8.2.10 Functions available on the screen S10: "My Internal Messaging"

The screen S10 gives access to the following sub-screens, that are directly re-used from existing Internal Messaging systems:

- S101: My Inbox
- S102: My Outbox
- S103: Write a New Internal Message
- S104: My Draft Messages
- S105: My Contacts and Mailing Lists
- S109: Download and save all messages of the Inbox from the Infrastructure on my local hard drive. This function is intended to simplify the local storage of the large number of Internal Messages generated by KuneAgi, and that are present for security and authentication purposes, as proofs to deter fraud, but are not immediately of operational use.

### 8.2.11 Functions available on the screen S11: "Increment my Time Credit"

The screen S11: "Increment my Time Credit" contains:

- a box in which to insert the single-use code provided by the Infrastructure
- a display of the remaining Time Credit available to the Member
- the date at which the remaining Time Credits will be exhausted
- a link to the trace of all Acknowledgements of Time Credit Increments (§ 4.2.14) received by the Member
- a text reminder on "how to increment my Time Credits".

The remaining Time Credit is permanently displayed on the menu bar, in a simplified form, according to the following table:

Time Credit remaining	Colour display on the menu bar
Time Credit > 1 month	Green
1 week < Time Credit ≤ 1 month	Yellow
1 day < Time Credit ≤ 1 week	Red
Time Credit ≤ 1 day	Blinking red

### 8.2.12 Functions available on the screen S98 of Proposal to Improve the KuneAgi software

The screen S98 of Proposal to Improve the KuneAgi software contains an appropriate form (PropImprove), described in § 4.3.29, classical in all free software projects.

### 8.2.13 Functions available on the screen S99 of On-Line Help

*## To be completed ##*

### 8.2.14 Functions available on the screen SNP1: "Welcome for Natural Persons"

The screen SNP1 gives access to the following sub-screens. Screens marked with an asterisk (\*) are available to Implementers only:

- SNP2: "Update my E-Mail address or my Official Position"
- SNP3: "Resign as a Natural Person or as an Implementer"
- SNP4: "Provide the Update Code", that was received in a Request to Update as a Natural Person (§ 4.2.37), in the Periodic Clean-Up of the database of Natural Persons (described in § 5.3)
- SNP5 (\*): "Take an Implement Decision on Action Proposals that are sufficiently Supported". Screen SNP5 provides a list of all Action Proposals that are in State D7 "Action Proposal sufficiently Supported". For each Action Proposal of the list, the Implementer can promote the Action Proposal to State D8 "Action Proposal being Implemented" or demote it to State D98 "End of process".
- SNP6 (\*): "Update the Status of an Implemented Action Proposal". Screen SNP6 provides a list of all Action Proposals that are in State D8 "Action Proposal being Implemented". For each Action Proposal of the list, the Implementer can add a new Implementation Status Update (as described in § 4.3.10).

## 8.3 Functions available on the non permanent screens

The non permanent screens are those available to a Member or to an Authenticated Natural Person (i.e. in State A1 of § 5.1.1) when she performs a specific non permanent function, in the framework of a distributed action: Authentication of a new Natural Person, Moderation, Distributed Control of Compliance with Principles and of Plagiarism Prevention. They are not directly accessible from the menu, but their address is given in the Authenticated Internal Message or Authenticated E-Mail that invites to perform the distributed action.

### 8.3.1 Distributed Authentication Screen (DAAuthS)

The Distributed Authentication Screen (DAAuthS) presents:

- the triplet (Family Name; Given Name; Complete Date of Birth) of the new Natural Person to be authenticated

- the date (defined in § 4.2.5) at which the vote of the Natural Person in charge of the Distributed Authentication will be considered as **positive** by default in case of inaction
- a text explaining the criteria to check on the copy of official identity document that she will receive from the new Member by e-mail
- a text reminding the list of Official Positions in the organisation that entitle to have the position of Implementer
- a text explaining that the Natural Person should be Authenticated only if both her identity and her position of Implementer are legitimate
- the function "Authenticate the Natural Person"
- the function "Reject the Natural Person".

### 8.3.2 Distributed Moderation Screen (DModS)

The Distributed Moderation Screen (DModS) presents, for the ActProp in the State D1 (as defined in §7.1), and that is submitted to the Member for Moderation:

- the date (defined in § 4.3.26) at which the vote of the Member in charge of the Distributed Moderation will be considered as **positive** by default in case of inaction
- the function "Validate the ActProp"
- the function "Reject the ActProp", by writing the justification part of the Notification of Decision by the Distributed Moderation (NoteDecDMod) described in § 4.3.14.

### 8.3.3 Distributed Control of Compliance with Principles and of Plagiarism Prevention Screen (DCCPPPS)

The Distributed Control of Compliance with Principles and of Plagiarism Prevention Screen (DCCPPPS) presents, for the ActProp in the State D5 (as defined in §7.1), and that is submitted to the Member for Distributed Control:

- the date (defined in § 4.3.27) at which the vote of the Member in charge of the Distributed Distributed Control of Compliance with Principles and of Plagiarism Prevention (DCCPPP) will be considered as **positive** by default in case of inaction
- the function "Validate the ActProp"
- the function "Reject the ActProp", by writing the justification part of the Notification of Decision by the Distributed Control of Compliance with Principles and of Plagiarism Prevention Screen (NoteDecDCCPPP) described in § 4.3.19.

## 8.4 The Mutual Marking Screen of Active Participants in a Working Group

The Mutual Marking Screen (MutMarkS) is not directly accessible from the menu. The circumstances that elicit the creation of this screen are those where the Active Participants in a Working Group (WkGrp) mark each other, which means:

- Resignation of an Active Participant from the Working Group, using the Resignation function described in § 8.2.6
- Automatic eviction of an Active Participant who brought no Contribution during *MaxTInactMb*, as described in § 9.2
- Exclusion of an Active Participant following a Collective Decision, in the cases when the Composition Control Mode of the WkGrp provides this possibility (i.e. when *CompControlMode* = *APostCont* or *DoubleCont*)

- Dissolution of the Working Group (transition towards the State G9).

When a single Active Participant leaves the WkGrp (for reason of resignation, exclusion or eviction for inactivity):

- this (former) Active Participant receives an Invitation to Evaluate (InvitEval) all the other Active Participants of the Working Group. The Invitation to Evaluate (InvitEval) is described in § 4.2.35
- the other Active Participants of this WkGrp receive an Invitation to Evaluate (InvitEval) this (former) Active Participant that just left the WkGrp.

When the WkGrp is globally dissolved, each Active Participant of this (former) WkGrp receives an Invitation to Evaluate (InvitEval) all the other Active Participants of the Working Group.

for each Active Participant that the Member is invited to evaluate, and for each of the two Marking criteria (Technical and Co-operative Behaviour) the Member may attribute one only among these 3 possible marks:

- positive opinion: the Appreciation Mark of the Active Participant on this criterion is increased by 1 point
- neutral opinion: the Appreciation Mark of the Active Participant on this criterion is left unchanged (default value)
- negative opinion: the Appreciation Mark of the Active Participant on this criterion is decreased by 1 point.

When the Member a validated her Marking, the total number of Marks received by the Active Participant purpose of the Evaluation is increased by 1.

## 9 Functions not triggered by State transitions nor by actions on the Human-Machine Interface

### 9.1 Triggering of Warnings

The Warnings described in the Action Proposal Production Process are sent with an advance notice of *TWarning*, so that the concerned Members or Working Group have the material possibility to prevent the event announced by the Warning.

Nature of the Warning	Triggering condition
Warning for Inactive Member in the Working Group (WarnInactMemb)	$(\text{Current Date} - \text{Date of last Contribution of the Member to this Working Group}) \geq (\text{MaxTInactMb} - T\text{Warning})$
Warning for Fruitless Working Group (WarnFruitlessWkGrp)	$(\text{Current Date} - \text{Date of last entry into the State D3 of the ActProp managed by this Working Group}) \geq (\text{MaxTNoAgree} - T\text{Warning} - T\text{Vote\_XXX})$ <b>or</b> $(\text{Current Date} - \text{Date of last entry into the State D3}) \geq (\text{MaxTNoAgree} - T\text{Warning} - T\text{Vote\_XXX})$
Warning for Inactive Working Group (WarnInactWkGrp)	$(\text{Current Date} - \text{Date of last entry into the State D2 of the ActProp managed by this Working Group}) \geq (\text{MaxTInactWkGrp} - T\text{Warning} - T\text{Vote\_XXX})$
Warning for Action Proposal under Production Insufficiently Supported (WarnActPropInsuffSupport)	$(\text{Current Date} - \text{Date of last entry into the State D6 of the ActProp managed by this Working Group}) \geq (\text{MaxTNoSupp} - T\text{Warning})$

XXX is the acronym of the Action Proposal Category (described in § 4.3.3).

### 9.2 Eviction of a Member from a Working Group

When one at least of the following conditions is true:

- $(\text{Current Date} - \text{Date of last Contribution of the Member to the Working Group}) \geq \text{MaxTInactMb}$
- **or** the other Active Participants of the WkGrp took the Collective Decision to Exclude this Member (DExcluMember)

the actions following are performed by the KuneAgi software:

- the Member is suppressed from the list of Active Participants in this WkGrp
- the Member is placed in the list of Observers of this WkGrp
- a Notification of Eviction is sent to the former Active Participant of the WkGrp
- an Invitation to Evaluate (InvitEval) is sent to this Member and to the Active Participants remaining in this WkGrp.

### 9.3 Automatic notification of change in the Numeric Constants

When the median of the values preferred by Members for a given Numeric Constant described



in chapter 18 changes, following action on Screen S9 (cf.8.2.9), the Infrastructure sends to all Members a Notification of Change in the Numeric Constants (NumConstChangeNote), described in § 4.3.28.

#### **9.4 Information on the Collective Decision DPubli**

**If** the Collective Decision DPubli is Rejected, **then** this outcome is stored in the Trace of Production Process.

## **10 General pre-requisites for scenario-based specifications**

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For all scenarios, except those regarding registration and authentication (scenarios 11.1, 11.2.1, and Erreur : source de la référence non trouvée), a common pre-requisite is that the actors involved have logged in, by providing their respective Pseudonym + Password set.

## 11 Registration and initialisation

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### 11.1 Initial authentication as a Member

The actors:

- the visitor
- the set of *NbDistribAuth* Natural Persons in State A1 chosen randomly to perform the Distributed Authentication

Pre-requisites: *DistribAuthent* = TRUE **and**

Scenario:

The visitor clicks on the "Registration" action of the Registration Screen § 8.2.1 and chooses to register as a Member.

**If** the number of Natural Persons in State A1 is  $\geq$  *NbDistribAuth* **then**

The visitor provides the Data required for the Distributed Authentication § 5.1.2

**If** the condition of table § 5.1.3, line (-; A0) is verified **then**:

- the Infrastructure performs the actions of the table § 5.1.4, line (-; A0).
- the Natural Person in State A0 sends directly via e-mail to the *NbDistribAuth* Natural Persons in charge of the Distributed Authentication the information requested in the Invitation to Justify one's Identity § 4.2.4
- the *NbDistribAuth* Natural Persons in charge of the Distributed Authentication access the Authenticated Vote (§ 3.4.4) displayed on the Distributed Authentication Screen (DAuthS) § 8.3.1 and click either on the action "Authenticate the Natural Person" or on the action "Reject the Natural Person"
- **if** the condition of table § 5.1.3, line (A0; A1) are verified, **then** the Infrastructure performs the actions of the table § 5.1.4, line (A0; A1)

**else** the Infrastructure performs the actions of the table § 5.1.4, line (A0; A9)

**end if.**

**else**

the Infrastructure performs the actions of the table § 5.1.4, line (A0; A1)

**end if.**

Data:

Data required for the Distributed Authentication § 5.1.2

Invitation to Justify one's Identity § 4.2.4

Possible future development: Protection of the registration by a Captcha mechanism.

### 11.2 Registration

#### 11.2.1 Initial registration as a Member

The actors: The new Member

Pre-requisites: The Member was provided a provisional, single-use Pseudonym + Password set **and** the Expiry date of the provisional, single-use Pseudonym + Password set is not passed.

Scenario:

The new Member accesses the Login screen S00 § 8.2.1 and provides his provisional, single-use Pseudonym + Password set.

The new Member accesses the Screen S2 "My profile".

The New Member defines his new Pseudonym + Password set.

The Infrastructure sets to TRUE the boolean variable § 4.2.3 that the Member has used his provisional, single-use Pseudonym + Password set.

The Infrastructure sends to the new Member a Welcome Notification for a Member (WelcomeNoteMember) § 4.2.9.

Data:

§ 4.2.3 Boolean variable that the Member has used his provisional, single-use Pseudonym + Password set

Date at which the provisional, single-use Pseudonym + Password set that was provided to her upon registration as a Natural Person expires

Welcome Notification for a Member (WelcomeNoteMember) § 4.2.9

Possible future development:

### **11.2.2 Purchase a Time Credit Increment**

The actors: The Member

Pre-requisites: The Time Credit of the Member is >0.

Scenario:

The Member accesses the screen GIS5: Purchase a Time Credit Increment, described in § 8.2.1. She chooses the duration that it wishes to purchase, and pays the amount requested on line.

The Infrastructure provides a single-use code, valid for a duration of *TValidCreditCode*.

The Member copies this single-use code.

The Member logs in with her usual Pseudonym + Password pair, before the end of the duration of validity of the single-use code.

The Member accesses the screen S11: "Increment my Time Credit", described in § 8.2.11, and pastes the single-use code in the box.

The Infrastructure increments the Time Credit remaining available to the Member with the Time Credit that she purchased, and sends an Acknowledgement of Time Credit Increment (AckTimeCredit) § 4.2.14.

Data:

The Time Credit of the Member.

The date at which the Time Credit of the Member will be exhausted.

Acknowledgement of Time Credit Increment (AckTimeCredit) § 4.2.14

Possible future development:

### **11.2.3 Initial registration as a Follower**

The actors: the visitor

Pre-requisites: None

Scenario:

The visitor clicks on the "Registration" action of the Registration Screen § 8.2.1 and chooses to register as a Follower.

The visitor provides the information requested to register as a Follower § 8.2.1.

The Infrastructure sends to the new Follower a Welcome Notification for a Follower (WelcomeNoteFollower) § 4.2.10.

Data:

Information requested to register as a Follower § 8.2.1.

Possible future development: Protection of the registration by a Captcha mechanism.

## **11.3 First contact: present oneself to the others**

The actors: The Member or the Follower.

Pre-requisites: None other than the general pre-requisites defined in § 10.

Scenario:

The Member or the Follower accesses the Screen S2 "My profile".

The Member or the Follower provides the data that he wishes among those where he has the "Write" or "Modify" right [1] 1-users-members-structfollower4.

Data: [1] 1-users-members-structfollower4

Possible future development:

## 11.4 Topics of Interest

### 11.4.1 Define one's Topics of Interest through the list of existing Topics of Interest

The actors: The Member or the Follower.

Pre-requisites: None other than the general pre-requisites defined in § 10.

Scenario:

The Member or the Follower accesses the screen S4 "My Topics of Interest".

The Member or the Follower clicks on the action "Create a new Topic of Interest"

The Member or the Follower chooses between "Close" and "Distant" Topic of Interest.

The Member or the Follower provides a Nickname to the Topic of Interest.

The Member or the Follower fills the form describing the Topic of Interest § 8.1.4.

The Member or the Follower clicks on the action "Save the new Topic of Interest" or on the action "Quit".

Data:

§ 4.2.1 for Close Topics of Interest

§ 4.2.3 for Distant Topics of Interest

Possible future development:

### 11.4.2 Define one's Topics of Interest through the Search screen

The actors: The Member or the Follower.

Pre-requisites: None other than the general pre-requisites defined in § 10.

Scenario:

The Member or the Follower accesses the screen S5 "Search a Working Group or a Action Proposal".

The Member or the Follower fills the form describing the Topic of Interest § 8.1.4.

The Member or the Follower clicks on the action "Perform the search".

The Member or the Follower clicks on the action "Save as a new Topic of Interest"

The Member or the Follower provides a Nickname to the Topic of Interest.

The Member or the Follower chooses between "Close" and "Distant" Topic of Interest.

Data:

§ 4.2.1 for Close Topics of Interest

§ 4.2.3 for Distant Topics of Interest

Possible future development:

## 12 Life of the Working Group

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### 12.1 Perform Collective Decisions

#### 12.1.1 Process the Vote of an Active Participant in the Collective Decision of a Working Group

The actors:

- the Active Participant of the Working Group having voting rights in the Collective Decision

Pre-requisites:

The Active Participant has performed her Authenticated Vote in the Collective Decision.

Scenario:

**If** the Authentication Check of the Vote is successful  
**then**

- the Infrastructure sends to the Active Participant in the WkGrp immediately after her vote an Acknowledgement of Vote in a Collective Decision (AckVoteCollDec) § 4.2.19
- the Infrastructure takes into account the Informative Content of the Authenticated Vote

**else** the Infrastructure displays a message "Authentication Check failed".

Data:

§ 4.2.19

Possible future development:

#### 12.1.2 Process the Votes received from a Working Group

The actors:

- the existing Active Participants of the Working Group

Pre-requisites:

The Authentication Checks of the Votes in the Collective Decision for all Active Participants in the WkGrp having a voting right in the Collective Decision are successful

**or** Current Date > End date of the Collective Decision

Scenario:

**If** the number of validated Authenticated Votes by the Active Participants is > 0 **then**

The Infrastructure computes the result of the Collective Decision according to the Collective Decision Mode of the WkGrp that was defined in the VoteStartNote, using the algorithms of § 7.7.2, and the validated Authenticated Votes received from the Active Participants

**else**

the result of the Collective Decision is "Reject"

**end if.**

The Infrastructure sends a Vote Result Notification (VoteResuNote) § 4.2.20 to all existing Active Participants in the WkGrp.

The Infrastructure stores the Vote Result and the Current Date in the Trace of the Production Process of the ActProp.

Data:

§ 4.2.20

Possible future development:

Processing of Schulze votes.

### 12.1.3 Initiate and process the Collective Decision – *DModifCollDecMode*

#### The actors:

- one Active Participant in the Working Group: the Initiator of the Collective Decision
- the other Active Participants in the Working Group.

#### Pre-requisites:

The Working Group is in the states specified in the table of § 8.2.6, line "Propose the Collective Decision to modify the Collective Decision Mode of the WkGrp - *DModifCollDecMode*".

#### Scenario:

The Initiator accesses the screen S6 "My Working Groups", selects a WkGrp of which he is an Active Participant, selects the action "Propose the Collective Decision to modify the Collective Decision Mode of the WkGrp – *DModifCollDecMode*" and specifies the new Collective Decision Mode that she proposes.

The Infrastructure sends to all existing Active Participant(s) in the WkGrp a Vote Start Notification (VoteStartNote) § 4.2.18 where (1) the Category of the Collective Decision = *DModifCollDecMode*. and (2) the new Collective Decision Mode is the one being proposed by the Initiator.

**For each** Active Participant in the WkGrp:

- the Active Participant:
  - accesses the screen S6 "My Working Groups", selects the WkGrp and the Authenticated Vote (§ 3.4.4) action "Vote in the Collective Decision – *DModifCollDecMode*"
  - **or** follows the hyperlink provided in the VoteStartNote
- the Active Participant selects either "Accept the new Collective Decision Mode" or "Reject"
- the Infrastructure performs the **Scenario** 12.1.1 "Process the Vote of an Active Participant in the Collective Decision of a Working Group".

The Infrastructure performs the **Scenario** 12.1.2 "Process the Votes received from a Working Group".

**end for.**

**If** the result of the Collective Decision is "Accept" **then** the Collective Decision Mode of the Working Group becomes the one proposed by the Initiator **end if**

#### Data:

§ 4.2.18

#### Possible future development:

### 12.1.4 Initiate and process the Collective Decision – *DModifCompContMode*

#### The actors:

- one Active Participant in the Working Group: the Initiator of the Collective Decision
- the other Active Participants in the Working Group.

#### Pre-requisites:

The Working Group is in the states specified in the table of § 8.2.6, line "Propose the Collective Decision to modify the Composition Control Mode of the WkGrp - *DModifCompContMode*".

#### Scenario:

The Initiator accesses the screen S6 "My Working Groups", selects a WkGrp of which he is an

Active Participant, selects the action "Propose the Collective Decision to modify the Composition Control Mode of the WkGrp – *DModifCompContMode*" and specifies the new Composition Control Mode that she proposes.

The Infrastructure sends to all existing Active Participant(s) in the WkGrp a Vote Start Notification (VoteStartNote) § 4.2.18 where (1) the Category of the Collective Decision = *DModifCompContMode*. and (2) the new Composition Control Mode is the one being proposed by the Initiator.

**For each** Active Participant in the WkGrp:

- the Active Participant:
  - accesses the screen S6 "My Working Groups", selects the WkGrp and the Authenticated Vote (§ 3.4.4) action "Vote in the Collective Decision – *DModifCompContMode*"
  - **or** follows the hyperlink provided in the VoteStartNote
- the Active Participant selects either "Accept the new Composition Control Mode" or "Reject"
- the Infrastructure performs the **Scenario** 12.1.1 "Process the Vote of an Active Participant in the Collective Decision of a Working Group".

The Infrastructure performs the **Scenario** 12.1.2 "Process the Votes received from a Working Group".

**end for.**

**If** the result of the Collective Decision is "Accept" **then** the Composition Control Mode of the Working Group becomes the one proposed by the Initiator **end if**

Data:

§ 4.2.18

Possible future development:

### 12.1.5 Process the Collective Decision – *DAcceptMember*

The actors:

- the existing Active Participant(s) of the Working Group
- the Member having applied to become a new Active Participant in the WkGrp

Pre-requisites:

The Working Group is in the states specified in the table of § 8.2.6, line "Vote in the Collective Decision to accept a Member as a new Active Participant – *DAcceptMember*."

**and** the Composition Control Mode of the Working Group is *APriori* **or** *Double*.

Scenario:

**If** the Member is not in the Waiting List of the WkGrp **then**

- the Infrastructure places the Member in the Waiting List of the WkGrp, and associates to the Member the date-time of his Registration
- the Infrastructure sends to the Member a Notification of Acceptance on the Waiting List of the Working Group (NoteWaitList) § 4.2.23, with the reason "Collective Decision pending"
- the Member becomes an Observer of the WkGrp

**end if**

The Infrastructure sends to all existing Active Participant(s) in the WkGrp a Vote Start Notification (VoteStartNote) § 4.2.18 where (1) the Category of the Collective Decision = *DAcceptMember* and (2) the Member proposed as a new Active Participant in the Working Group is the Member.

**For each** existing Active Participant in the WkGrp:

- the Active Participant:



- accesses the screen S6 "My Working Groups", selects the WkGrp and the Authenticated Vote (§ 3.4.4) action "Vote in the Collective Decision – *DAcceptMember*"
- **or** follows the hyperlink provided in the VoteStartNote
- the Active Participant displays the profile data of the Member for which he has the "Read" right [1] 1-users-members-structfollower4 for the Member
- the Active Participant selects either "Accept the Member as new Active Participant" or "Reject"
- the Infrastructure performs the **Scenario** 12.1.1 "Process the Vote of an Active Participant in the Collective Decision of a Working Group".

The Infrastructure performs the **Scenario** 12.1.2 "Process the Votes received from a Working Group".

**end for.**

**If** the result of the Collective Decision is "Accept" **then**

- the Member becomes an Active Participant in the WkGrp
- the Member is no more an Observer in the WkGrp
- the Member is no more in the Waiting List of the WkGrp
- the Infrastructure sends a Notification of Acceptance as an Active Participant in the Working Group (NoteAccept) § 4.2.21 to the Member

**else** the Infrastructure sends a Notification of Refusal as an Active Participant in the Working Group (NoteRefusal) § 4.2.22 to the Member

**end if.**

Data:

§ 4.2.18

§ 4.2.21

§ 4.2.22

§ 4.2.23,

[1] 1-users-members-structfollower4

Possible future development:

### **12.1.6 Initiate and process the Collective Decision – *DExcluMember***

The actors:

- one Active Participant in the Working Group: the Initiator of the Collective Decision
- the Active Participant being proposed to be excluded, different from the Initiative
- the Active Participant(s) of the Working Group, other than the Active Participant being proposed to be excluded and than the Initiator.

Pre-requisites:

The Working Group is in the states specified in the table of § 8.2.6, line "Propose the Collective Decision to Exclude an Active Participant from the Working Group – *DExcluMember*".

**and** (the Composition Control Mode of the Working Group is *APosteriori* **or** *Double*.)

Scenario:

The Initiator accesses the screen S6 "My Working Groups", selects a WkGrp of which he is an Active Participant, and selects the action "Propose the Collective Decision to Exclude an Active Participant from the Working Group – *DExcluMember*".

The Infrastructure sends to all existing Active Participant(s) in the WkGrp a Vote Start Notification (VoteStartNote) § 4.2.18 where (1) the Category of the Collective Decision = *DExcluMember* and (2) the Active Participant proposed to be excluded from the Working Group is the one described as an Actor of the scenario.

**For each** Active Participant in the WkGrp, other than the Active Participant being proposed to be excluded:

- the Active Participant:
  - accesses the screen S6 "My Working Groups", selects the WkGrp and the Authenticated Vote (§ 3.4.4) action "Vote in the Collective Decision – *DExcluMember*"
  - **or** follows the hyperlink provided in the VoteStartNote
- the Active Participant selects either "Accept the exclusion of the Active Participant" or "Reject"
- the Infrastructure performs the **Scenario** 12.1.1 "Process the Vote of an Active Participant in the Collective Decision of a Working Group".

The Infrastructure performs the **Scenario** 12.1.2 "Process the Votes received from a Working Group".

**end for.**

**If** the result of the Collective Decision is "Accept" **then** Apply **scenario** 12.2.5 "Force an Active Participant to leave a Working Group" to the Active Participant being proposed to be excluded

**end if**

Data:

§ 4.2.18

Possible future development:

### **12.1.7 Initiate and process the Collective Decision – *DSwDecision***

The actors:

- one Active Participant in the Working Group: the Initiator of the Collective Decision
- the other Active Participants in the Working Group.

Pre-requisites:

The Working Group is in the states specified in the table of § 8.2.6, line "Propose the Collective Decision to switch the WkGrp into "Decision on Amendments" Mode - *DSwDecision*".

Scenario:

The Initiator accesses the screen S6 "My Working Groups", selects a WkGrp of which he is an Active Participant, and selects the action "Propose the Collective Decision to switch the WkGrp into "Decision on Amendments" Mode - *DSwDecision*".

The Infrastructure sends to all existing Active Participant(s) in the WkGrp a Vote Start Notification (VoteStartNote) § 4.2.18 where the Category of the Collective Decision = *DSwDecision*.

**For each** Active Participant in the WkGrp:

- the Active Participant:
  - accesses the screen S6 "My Working Groups", selects the WkGrp and the Authenticated Vote (§ 3.4.4) action "Vote in the Collective Decision – *DSwDecision*"
  - **or** follows the hyperlink provided in the VoteStartNote
- the Active Participant selects either "Accept to switch in Decision on Amendments Mode" or "Reject"
- the Infrastructure performs the **Scenario** 12.1.1 "Process the Vote of an Active Participant in the Collective Decision of a Working Group".

The Infrastructure performs the **Scenario** 12.1.2 "Process the Votes received from a Working Group".

**end for.**

**If** the result of the Collective Decision is "Accept" **then**

- the ActProp switches to State D4: "Decision on Amendments"
- the Infrastructure stores in the Trace of the Production Process of the ActProp: the Decision to switch in "Decision on Amendments" Mode, and the Current Date as the date for the transition into State D4.

**end if**

Data:

§ 4.2.18

Possible future development:

### 12.1.8 Process the Collective Decision – *DAmend*

The actors:

- the Active Participant(s) of the Working Group.

Pre-requisites:

The Working Group is in the states specified in the table of § 8.2.6, line "Decision on Amendments – *DAmend*".

Scenario:

The Infrastructure sends to all existing Active Participant(s) in the WkGrp a Vote Start Notification (VoteStartNote) § 4.2.18 where (1) the Category of the Collective Decision = *DAmend*. and (2) the list of Amendments is that being proposed for the Current Version of the ActProp.

The Infrastructure stores the Current Version of the ActProp in the list of earlier Versions of the ActProp and increments by 1 the Number of the Current Version.

**For each** Active Participant in the WkGrp:

- the Active Participant:
  - accesses the screen S6 "My Working Groups", selects the WkGrp and the Authenticated Vote (§ 3.4.4) action "Vote in the Collective Decision – *DAmend*"
  - **or** follows the hyperlink provided in the VoteStartNote
- **for each** Amendment being proposed for the Current Version of the ActProp:
  - the Active Participant selects either "Accept the Amendment" or "Reject"
  - the Infrastructure performs the **Scenario** 12.1.1 "Process the Vote of an Active Participant in the Collective Decision of a Working Group".
- **end for.**

**end for.**

**For each** Amendment being proposed for the ActProp

- The Infrastructure performs the **Scenario** 12.1.2 "Process the Votes received from a Working Group".
- **If** the result of the Collective Decision is "Accept" **then** the Current Version of the ActProp is modified to integrate the proposed Amendment **end if**

**end for.**

The ActProp switches to State D3 "WkGrp Active in Debate Mode".

The Infrastructure performs the last two actions of Table § 7.4, line (D4; D3).

Data:

§ 4.2.18

Possible future development:

Schulze vote between parallel competing Amendment options, when they modify the same

segment of text.

### 12.1.9 Initiate and process the Collective Decision – *DPubli*

The actors:

- one Active Participant in the Working Group: the Initiator of the Collective Decision
- the other Active Participants in the Working Group.

Pre-requisites:

The Working Group is in the states specified in the table of § 8.2.6, line "Propose the Collective Decision – *DPubli*."

Scenario:

The Initiator accesses the screen S6 "My Working Groups", selects a WkGrp of which he is an Active Participant, and selects the action "Propose the Collective Decision to Publish the ActProp - *DPubli*".

The Infrastructure sends to all existing Active Participant(s) in the WkGrp a Vote Start Notification (VoteStartNote) § 4.2.18 where the Category of the Collective Decision = *DPubli*.

**For each** Active Participant in the WkGrp:

- the Active Participant:
  - accesses the screen S6 "My Working Groups", selects the WkGrp and the Authenticated Vote (§ 3.4.4) action "Vote in the Collective Decision – *DPubli*"
  - **or** follows the hyperlink provided in the VoteStartNote
- the Active Participant selects either "Accept the Publication of the Action Proposal" or "Reject"
- the Infrastructure performs the **Scenario** 12.1.1 "Process the Vote of an Active Participant in the Collective Decision of a Working Group".

The Infrastructure performs the **Scenario** 12.1.2 "Process the Votes received from a Working Group".

**end for.**

**If** the result of the Collective Decision is "Accept" **then**

- the ActProp switches to State D5: "Final Version of the ActProp validated by the Working Group (WkGrp) for publication"
- the Infrastructure stores in the Trace of the Production Process of the ActProp: the Decision to Publish the Action Proposal and the Current Date as the date for the transition into State D5.

**end if**

Data:

§ 4.2.18

Possible future development:

## 12.2 Enter and leave a Working Group

### 12.2.1 Include a Member as a new Active Participant in a Working Group

The actors:

- the Member having registered to become an Active Participant in the WkGrp.

Pre-requisites:

The Member has registered to become an Active Participant in the WkGrp.

Scenario:

**If** the Composition Control Mode of the WkGrp is *Free* or *APostCont* **then**

- the Member becomes an Active Participant in the WkGrp
- the Infrastructure sends to the Member a Notification of Acceptance as an Active Participant in the Working Group (NoteAccept) § 4.2.21

**else**

- the Infrastructure performs the **Scenario** 12.1.5 "Process the Collective Decision – *DAcceptMember*"

Data:

§ 4.2.21

Possible future development:

### 12.2.2 Register as an Active Participant in an existing Working Group

The actors:

- the existing Active Participant(s) of the Working Group
- the Member

Pre-requisites:

The Working Group is in the states specified for "Register as an Active Participant" in the list of functions available on Screen S 51 of § 8.2.5.

**and** the number of Working Groups of which the Member is an Active Participant or on the Waiting List is  $< MaxNbActWkGrp$ .

Scenario:

The Member executes the **Scenario** 13.1.1 "Display an existing Action Proposal".

The Member clicks on the action "Register as an Active Participant to the Working Group" for the selected ActProp.

**If** the number of Active Participants in the Working Group is  $< MaxNbWkGrp$

**then** the **Scenario** 12.2.1 "Include a Member as a new Active Participant in a Working Group" is applied to the Member

**else**

- the Infrastructure places the Member in the Waiting List of the WkGrp, and associates to the Member the date-time of his Registration.
- the Member becomes an Observer of the WkGrp
- the Infrastructure sends to the Member a Notification of Acceptance on the Waiting List of the Working Group (NoteWaitList) § 4.2.23, with the reason "WkGrp is full".

Data:

§ 4.2.23

Possible future development:

### 12.2.3 Resign as an Active Participant of an existing Working Group

The actors:

- the Member
- the Active Participants in the WkGrp
- the Members of the Waiting List of the WkGrp

Pre-requisites:

The Working Group is in the states specified in the table of § 8.2.6, line "Resign from the position of Active Participant"

**and** the Member is an Active Participant of at least one WkGrp.

Scenario:

The Member accesses the screen S6 "My Working Groups", selects a WkGrp of which he is an Active Participant, and selects the Authenticated Resignation action (§ 3.4.5) "Resign from the role of Active Participant in the WkGrp" for that WkGrp.

**If** the Authentication Check of the Resignation is successful **then**

- the Member is no more an Active Participant in the WkGrp
- the Infrastructure sends to the former Active Participant an Acknowledgement of Resignation for an Active Participant (AckResignActPart) § 4.2.30
- the Infrastructure performs the **scenario** 12.2.10 "Mark the technical competence and behaviour of other Members"
- **if** the Waiting List of the WkGrp is not empty **then** the Infrastructure applies **Scenario** 12.2.1 "Include a Member as a new Active Participant in a Working Group" to the Member in the Waiting List whose Registration Date is the earliest. **end if**

**else** the Infrastructure displays a message "Authentication Check failed"

Data:

§ 4.2.30

Possible future development:

#### 12.2.4 Resign from the Waiting List of an existing Working Group

The actors:

- the Member
- the Members of the Waiting List of the WkGrp

Pre-requisites:

The Member is the Observer on the Waiting List of at least one WkGrp.

Scenario:

The Member accesses the screen S6 "My Working Groups", selects a WkGrp of which he is on the Waiting List and selects the Authenticated Resignation action (§ 3.4.5) "Resign from the Waiting List of the WkGrp" for that WkGrp.

**If** the Authentication Check of the Resignation is successful **then**

- the Member is no more in the Waiting List of the WkGrp
- the Infrastructure sends to the former Member on the Waiting List an Acknowledgement of Resignation from the Waiting List (AckResignWaitList) § 4.2.32

**else** the Infrastructure displays a message "Authentication Check failed"

Data:

§ 4.2.32

Possible future development:

#### 12.2.5 Force an Active Participant to leave a Working Group

The actors:

- the Active Participant in the Working Group being forced to leave.

Pre-requisites: None other than the general pre-requisites defined in § 10.

Scenario:

The Active Participant being forced to leave is no more an Active Participant of the WkGrp.

The Active Participant being forced to leave becomes an Observer of the WkGrp.

The Infrastructure sends a Notification of Eviction of a Member out of a Working Group (NoteEvict) § 4.2.33 to the Active Participant being forced to leave.

The Infrastructure performs the **scenario** 12.2.10 "Mark the technical competence and

behaviour of other Members""

**If** the Waiting List of the WkGrp is not empty **then** the Infrastructure applies **Scenario** 12.2.1 "Include a Member as a new Active Participant in a Working Group" to the Member in the Waiting List whose Registration Date is the earliest. **end if**

Data:

§ 4.2.33

Possible future development:

### 12.2.6 Warn an inactive Member in a Working Group

The actors:

- an Active Participant in a Working Group

Pre-requisites: Condition set in Table § 9.1, line *WarnInactMemb* is verified.

Scenario: The Infrastructure sends a Warning for Inactive Member in the Working Group § 4.2.26 to the Member.

Data:

§ 4.2.26

Possible future development:

### 12.2.7 Automatically expel an Active Participant from a Working Group

The actors:

- an Active Participant in a Working Group

Pre-requisites: The first condition set in § 9.2 is verified

Scenario: The Infrastructure applies **scenario** 12.2.5 "Force an Active Participant to leave a Working Group" to the Active Participant.

Data:

Possible future development:

### 12.2.8 Register as an Observer in an existing Working Group

The actors:

- the Member or the Follower

Pre-requisites:

The Working Group is in the states specified for "Register as an Observer" in the list of functions available on Screen S 51 of § 8.2.5.

Scenario:

The Member or the Follower executes the **Scenario** 13.1.1 "Display an existing Action Proposal".

The Member or the Follower clicks on the action "Register as Observer to the Working Group" for the selected ActProp.

The Member or the Follower becomes an Observer of the WkGrp.

The Infrastructure sends to the Member or the Follower an Acknowledgement of the Member or of the Follower as an Observer in the Working Group (AckObserverIn) § 4.2.24

Data:

§ 4.2.24

Possible future development:

### 12.2.9 Resign as an Observer in a Working Group

The actors:

- the Member or the Follower

Pre-requisites:

The Member or the Follower is the Observer of at least one WkGrp.

Scenario:

The Member or the Follower executes the **Scenario** 13.1.1 "Display an existing Action Proposal".

The Member or the Follower clicks on the action "Resign as Observer in the Working Group" for the selected ActProp where she is an Observer.

The Member or the Follower loses her status of Observer in the WkGrp.

The Infrastructure sends to the Member of the Follower an Acknowledgement of Resignation for an Observer (AckObserverOut) § 4.2.31

Data:

§ 4.2.31

Possible future development:

### 12.2.10 Mark the technical competence and behaviour of other Members

The actors:

- The Member who just left the role of Active Participant in a Working Group
- the remaining Active Participants in the Working Group.

Pre-requisites: None other than the general pre-requisites defined in § 10.

Scenario:

The Infrastructure sends to the Member an Invitation to Evaluate (InvitEval) § 4.2.35 for each of the remaining Active Participants in the Working Group

The Infrastructure sends to each of the remaining Active Participants in the Working Group an Invitation to Evaluate the Member (InvitEval) § 4.2.35

The Member and the remaining Active Participants in the Working Group access the Mutual Marking Screen § 8.4 and allocate the marks accordingly

The Technical Appreciation Mark, the Co-operative Behaviour Appreciation Mark and the total number of Appreciation Marks ([1] 1-users-members-structmember4) received are modified for the Member and for the remaining Active Participants in the WkGrp, according to the marks applied.

Data:

[1] 1-users-members- structmember4

§ 4.2.35

Possible future development:

## 12.3 Events affecting the Working Group

### 12.3.1 Inform that the Working Group is Active

The actors:

- the Active Participants and Observers of the Working Group

Pre-requisites:

The ActProp is in State D2

**and** the condition defined in Table § 7.3, line (D2; D3) is verified.



Scenario:

The Infrastructure sends a Notification of Active Working Group (NoteActWkGrp) § 4.2.25 to all Active Participants and Observers of the Working Group.

Data:

§ 4.2.25

Possible future development:

### 12.3.2 Notify that the Working Group is Inactive

The actors:

- the Active Participants and Observers of the Working Group

Pre-requisites:

The ActProp is in State D3 or D4.

**and** the condition defined in Table § 7.3, line (D3, D4; D2) is verified.

Scenario:

The Infrastructure sends a Notification of an Inactive Working Group (NoteInactWkGrp) § 4.2.29 to all Active Participants and Observers of the Working Group.

Data:

§ 4.2.29

Possible future development:

### 12.3.3 Warn that the Working Group has been Inactive for too long

The actors:

- the Active Participants of the Working Group

Pre-requisites:

The ActProp is in State D2 **and** the condition of § 9.1, line *WarnInactWkGrp* is verified.

Scenario:

The Infrastructure sends a Warning for Inactive Working Group (WarnInactWkGrp) § 4.2.27 to all Active Participants of the Working Group.

Data:

§ 4.2.27

Possible future development:

### 12.3.4 Warn that a Working Group is fruitless

The actors:

- the Active Participants in the Working Group

Pre-requisites:

he ActProp is in State D3 **and** the condition given in Table § 9.1, line *WarnFruitlessWkGrp*, is verified.

Scenario:

The Infrastructure sends to all Active Participants in the Working Group a Warning for Fruitless Working Group (WarnFruitlessWkGrp) § 4.2.28.

Data:

§ 4.2.28

Possible future development:

## 13 Process Action Proposals

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### 13.1 Display Action Proposals

#### 13.1.1 Display an existing Action Proposal

The actors: The Member or the Follower.

Pre-requisites: None other than the general pre-requisites defined in § 10.

Scenario:

The Member or the Follower accesses the screen S5: "Search a Working Group or an Action Proposal".

The Member or the Follower fills in the Topic of Interest form § 8.1.4 and clicks on the "Search" function.

The Member or the Follower selects a ActProp in the list being displayed.

The Member or the Follower selects whether he wants the ActProp to be displayed in Abridged or in Complete Presentation (§ 8.1.1).

Data: § 8.1.4

Possible future development:

#### 13.1.2 Display the Action Proposal of one's Working Group

The actors: The Active Participant or the Observer of a Working Group

Pre-requisites: None other than the general pre-requisites defined in § 10.

Scenario:

The Active Participant or the Observer accesses the screen S6: "My Working Groups".

The Active Participant or the Observer selects a ActProp in the list being displayed.

The Active Participant or the Observer selects whether he wants the ActProp to be displayed in Abridged or in Complete Presentation § 8.1.1.

Data: None.

Possible future development:

### 13.2 Acknowledge the reception of a Contribution

The actors:

- the Active Participant of a Working Group.

Pre-requisites: None

Scenario:

The Infrastructure sends an Acknowledgement of Receiving a Contribution (AckContribute) § 4.3.8 to the Active Participant and stores the Current Date as the date of latest Contribution to the Working Group by this Active Participant (§ 4.2.17 and 4.2.3).

Data:

§ 4.2.17 and 4.2.3

§ 4.3.8

Possible future development:

## 13.3 Create an Action Proposal

### 13.3.1 Create the Initial Version of an Action Proposal (Investment Proposal)

The actors: The Member.

Pre-requisites: The Member is an Active Member of strictly less than *MaxNbActWkGrp* Working Groups.

Scenario:

The Member accesses the screen S3 "Start the Production of an Action Proposal".

The Member clicks on the action: "Create the Initial Version of a new Action Proposal".

The Member fills the blank Complete Presentation of a ActProp (§ 8.1.1) according to the FMOGI rights of each field. The fields of the ActProp for an Investment Proposal (*InvestProp*) are specified in § 4.3.12 and § 4.7.9.

The Member fills the blank Abridged Presentation of the attached WkGrp (§ 8.1.3) that is to be created upon approval by the Distributed Moderation . The number of Active Participants is initialised to 1; the number of Observers is initialised to 0; and neither of them can be modified.

The Member clicks on the actions:

- "Save" to keep the draft ActProp in State D0 for later completion,
- "Discard" to erase the ActProp
- **if** the mandatory fields specified in § 4.3.2 are filled, **then** the Member can click on "Submit" when she is happy with the ActProp. The Infrastructure places the Action Proposal in State D1, stores the Current Date as the date of the transition in State D1 in the Trace of the Production Process, and applies the scenario 13.2 "Acknowledge the reception of a Contribution" to the Member. **end if**.

Data:

§ 4.3.2

§ 8.1.1 and 8.1.3

§ 4.3.12 and § 4.7.9

Possible future development:

### 13.3.2 Create an Action Proposal by copying an existing ActProp

The actors: The Member.

Pre-requisites: The Member is an Active Member of strictly less than *MaxNbActWkGrp* Working Groups.

Scenario:

The Member executes the **Scenario** 13.1.1 "Display an existing Action Proposal" **or** the **Scenario** 13.1.2 "Display the Action Proposal of one's Working Group".

The Member clicks on the action "Duplicate and create a new Action Proposal".

The Member performs the **Scenario** § 13.3.1 "Create the Initial Version of an Action Proposal" on the duplicated ActProp.

Data: None.

Possible future development:

## 13.4 Perform the Distributed Moderation on a ActProp

The actors:

- The Member, Author of the Initial Version of the ActProp
- The set of *NbDistribModer* Members chosen randomly to perform the Distributed

Moderation

- All Members or Followers whose Close Topics of Interest match the Indexing Meta-Data of the ActProp

Pre-requisites: The ActProp is in State D1

Scenario:

**If** the number of Members is  $\geq (NbDistribModer + 1)$ . **then**

The Infrastructure selects randomly *NbDistribModer* Moderators among all Members except the Author of the initial Version.

The Infrastructure sends an Invitation to Moderate (InvitModer) § 4.3.26 to those randomly-selected Moderators.

Each of the randomly- selected Moderators logs in, accesses the Authenticated Vote (§ 3.4.4) action displayed on the Distributed Moderation Screen (DModS) § 8.3.2, and clicks either on the action "Validate the ActProp" or on the action "Reject the ActProp".

**If** (the Moderator clicks on "Reject the ActProp" **and** the Authentication Check is successful) **then** the Infrastructure submits a form requesting the Justification of the negative Moderation vote § 4.3.14.

**As soon as** (the Authentication Check of the votes of all Moderators is successful **or** the date specified in the Invitation to Moderate (InvitModer) has elapsed)

**do**

- **if** the number of successful Authenticated Votes by the Moderators is  $> 0$  **then** the Infrastructure computes the result of the vote, by simple majority among the valid Votes received, with ties solved as "Accept" **else** the result of the vote is "Accept" **end if**
- the Infrastructure sends the Notification of Decision by the Distributed Moderation (NoteDecDMod) § 4.3.14 to the Member, author of the Initial Version of the ActProp.
- **If** the decision by the Distributed Moderation is "Accept", **then** the Infrastructure :
  - places the Action Proposal in State D2
  - stores the Current Date as the date of the transition in State D2 in the Trace of the Production Process of the ActProp
  - sends a New Action Proposal Notification (NewActPropNote) to each Member or Follower whose Close Topics of Interest match the Indexing Meta-Data of the Action Proposal (ActProp)
  - creates the WkGrp attached to the ActProp
  - makes the Author of the Initial Version as the first Active Participant of the WkGrp

• **end if**

**end do**

**else**

The Infrastructure:

- sends the Notification of Decision by the Distributed Moderation (NoteDecDMod) § 4.3.14 to the Member, author of the Initial Version of the ActProp
- places the Action Proposal in State D2
- stores the Current Date as the date of the transition in State D2 in the Trace of the Production Process of the ActProp
- sends a New Action Proposal Notification (NewActPropNote) to each Member or Follower whose Close Topics of Interest match the Indexing Meta-Data of the Action Proposal (ActProp)
- creates the WkGrp attached to the ActProp
- makes the Author of the Initial Version as the first Active Participant of the WkGrp

**end if**

Data:

Invitation to Moderate (InvitModer) § 4.3.26

Notification of Decision by the Distributed Moderation (NoteDecDMod) § 4.3.14, including potentially the Justifications of the negative Moderation votes.

Possible future development:

## 13.5 Amendments and comments

### 13.5.1 Comment a ActProp publicly

The actors:

- the Active Participant or the Observer of the Working Group.

Pre-requisites: The ActProp is in the States defined in Table § 8.2.6, line "Add an information or an argument to an External Debate Report (*ExtDebReport*)".

Scenario:

The Active Participant or the Observer executes the **Scenario** 13.1.2 "Display the Action Proposal of one's Working Group".

The Active Participant or the Observer selects the Action "Add an information or an argument to an External Debate Report (*ExtDebReport*)".

The Active Participant or the Observer adds or modifies a comment in the External Debate Report (*ExtDebReport*) of the ActProp § 4.3.5.

Data:

§ 4.3.5

Possible future development:

### 13.5.2 Comment a ActProp or an Amendment internally

The actors:

- the Active Participant of the Working Group.

Pre-requisites: The ActProp is in the States defined in Table § 8.2.6, line "Add an information or an argument to a Report on Exchange of Arguments and Information (REAI)".

Scenario:

The Active Participant executes the **Scenario** 13.1.2 "Display the Action Proposal of one's Working Group".

The Active Participant selects the Action "Add an information or an argument to a Report on Exchange of Arguments and Information (REAI)".

The Active Participant selects the full ActProp or a specific Amendment.

The Active Participant adds a comment in the Report on Exchange of Arguments and Information (REAI) § 4.3.4 of the ActProp or of the Amendment.

The Infrastructure applies the **scenario** 13.2 "Acknowledge the reception of a Contribution" to the Active Participant of the Working Group.

Data:

§ 4.3.4

Possible future development:

### 13.5.3 Propose an Amendment to the ActProp

The actors:

- the Active Participant of the Working Group
- the other Active Participants and Observers of the Working Group.

Pre-requisites: The ActProp is in the States defined in Table § 8.2.6, line "Create and Modify a Formal Amendment (FormAmend) or a Substantial Amendment (SubstAmend)".

Scenario:

The Active Participant executes the **Scenario** 13.1.2 "Display the Action Proposal of one's Working Group".

The Active Participant selects the Action "Create and Modify a Formal Amendment (FormAmend) or a Substantial Amendment (SubstAmend)".

The Active Participant selects whether the Amendment is a Formal Amendment or a Substantial Amendment.

**If** the Active Participant selected FormAmend **then**

the Active Participant provides the information defined in § 4.3.6

**else**

the Active Participant provides the information defined in § 4.3.7 and 4.7.10 **end if**.

The Active Participant provides a justification of the proposed Amendment in the Report on Exchange of Arguments and Information (REAI) of the ActProp § 4.3.4.

The Infrastructure applies the **scenario** 13.2 "Acknowledge the reception of a Contribution" to the Active Participant of the Working Group.

The Infrastructure sends a Notification of New Amendment (NoteNewAmend) § 4.3.16 to the other Active Participants and to the Observers of the WkGrp.

Data:

§ 4.3.4

§ 4.3.6

§ 4.3.7 and 4.7.10

§ 4.3.16

Possible future development:

## 13.6 Perform the Distributed Control of Compliance with Principles and Plagiarism Prevention on a ActProp

The actors:

- The set of *NbDistribCCPPP* Members (the Controllers) chosen randomly to perform the Distributed Control of Compliance with Principles and Plagiarism Prevention (CCPPP)
- The Active Participants and Observers of the Working Group that published the ActProp
- All Members or Followers whose Distant Topics of Interest match the Indexing Meta-Data of the ActProp

Pre-requisites: The ActProp is in State D5

**and** the number of Members is  $\geq NbDistribCCPPP$ .

Scenario:

**If** the number of Members that are not Active Participants in the Working Group that published the ActProp is  $\geq NbDistribCCPPP$  **then**

The Infrastructure selects randomly *NbDistribCCPPP* Controllers among those Members that are not Active Participants in the Working Group that published the ActProp.

The Infrastructure sends an Invitation to Control the Compliance with Principles and to Prevent Plagiarism (InvitCCPPP) § 4.3.27 to those randomly-selected Controllers.

Each of the randomly- selected Controllers accesses the Authenticated Vote (§ 3.4.4) action displayed on the Distributed Control of Compliance with Principles and of Plagiarism Prevention Screen (DCCPPPS) § 8.3.3 and clicks either on the action "Validate the ActProp" or on the action "Reject the ActProp".

**If** (the Controller clicks on "Reject the ActProp" **and** the Authentication Check is successful) **then** the Infrastructure submits a form requesting the Justification of the negative CCPPP vote § 4.3.19.

**As soon as** (the Authentication Check of the votes of all Controllers is successful **or** the date specified in the Invitation to Control the Compliance with Principles and to Prevent Plagiarism (InvitCCPPP) has elapsed)

**do**

- **if** the number of successful Authenticated Votes by the Controllers is  $> 0$  **then** the Infrastructure computes the result of the vote, by simple majority among the valid Votes received, with ties solved as "Accept" **else** the result of the vote is "Accept" **end if**
- the Infrastructure sends the Notification of Decision by the Distributed Control of Compliance with Principles and of Plagiarism Prevention (NotDecDCCPPP) §4.3.19 to the Active Participants and Observers of the Working Group that published the ActProp.
- **If** the decision by the Distributed Control of Compliance with Principles and Plagiarism Prevention is "Accept", **then** the Infrastructure:
  - places the Action Proposal in State D6
  - stores the Current Date as the date of the transition in State D6 in the Trace of the Production Process of the ActProp
  - sends a Publication Notification (PubNote) § 4.3.20 to each Member or Follower whose Distant Topics of Interest match the Indexing Meta-Data of the Action Proposal (ActProp)
  - **For each** Active Participant in the WkGrp, the Infrastructure applies the **scenario** 12.2.10 "Mark the technical competence and behaviour of other Members". **end for**.
  - dissolves the WkGrp attached to the ActProp

• **end if**

**end do**

**else**

the Infrastructure :

- sends the Notification of Decision by the Distributed Control of Compliance with Principles and of Plagiarism Prevention (NotDecDCCPPP) § 4.3.19 to the Active Participants and Observers of the Working Group that published the ActProp
- places the Action Proposal in State D6
- stores the Current Date as the date of the transition in State D6 in the Trace of the Production Process of the ActProp
- sends a Publication Notification (PubNote) § 4.3.20 to each Member or Follower whose Distant Topics of Interest match the Indexing Meta-Data of the Action Proposal (ActProp)
- **For each** Active Participant in the WkGrp, the Infrastructure applies the **scenario** 12.2.10 "Mark the technical competence and behaviour of other Members" **end for**
- dissolves the WkGrp attached to the ActProp.

**end if**

Data:

§ 4.3.27

§ 4.3.19

§ 4.3.20

Possible future development:

## 13.7 Support published Action Proposals

### 13.7.1 Support an Action Proposal for the first time

The actors:

- the Member.

Pre-requisites:

(The ActProp is in State D6 "Final Version of the ActProp validated by the Distributed Control of Compliance with Principles and of Plagiarism Prevention (DCCPPP)" **or** in State D7: "Final Version of the ActProp validated by a sufficient number of Support Tokens or by the Schulze Procedure")

**and** the Member has at least one non-attributed Support Token.

Scenario:

The Member executes the **Scenario** 13.1.1 "Display an existing Action Proposal".

The Member clicks on the Authenticated Vote (§ 3.4.4) action "Give a Support Token to the selected ActProp" and selects the Type of Support Token being given.

**If** the Authenticated Vote is validated **then**

- The Infrastructure sends an Acknowledgement of Support Token Modification (AckModifToken) § 4.5.7 to the Member
- the number of Support Tokens of the Type being given by the Member is increased by 1 for the ActProp
- the number of non-attributed Support Tokens for the Member is reduced by 1.

**end if**

Data:

§ 4.5.7

Possible future development:

### 13.7.2 Modify one's existing Support to an Action Proposal

The actors:

- the Member.

Pre-requisites:

(The ActProp is in State D6 "Final Version of the ActProp validated by the Distributed Control of Compliance with Principles and of Plagiarism Prevention (DCCPPP)" **or** in State D7: "Final Version of the ActProp validated by a sufficient number of Support Tokens or by the Schulze Procedure")

**and** the Member has attributed one Support Token to this ActProp.

Scenario:

(The Member executes the **Scenario** 13.1.1 "Display an existing Action Proposal" on the ActProp where she allocated a Support Token

**or** the Member accesses the Screen S7 "My External Supports" and selects a ActProp in the list)

The Member clicks on the Authenticated Vote (§ 3.4.4) action "Modify the Support Token of the selected ActProp" and selects the new Type of Support Token being given.

**If** the Authenticated Vote is validated **then**

- The Infrastructure sends an Acknowledgement of Support Token Modification



(AckModifToken) § 4.5.7 to the Member

- the Type of the Support Token for the ActProp is modified according to the action taken by the Member.

**end if**

Data:

§ 4.5.7

Possible future development:

### 13.7.3 Take away one's existing Support to an Action Proposal

The actors:

- the Member.

Pre-requisites:

(The ActProp is in State D6 "Final Version of the ActProp validated by the Distributed Control of Compliance with Principles and of Plagiarism Prevention (DCCPPP)" **or** in State D7: "Final Version of the ActProp validated by a sufficient number of Support Tokens or by the Schulze Procedure")

**and** the Member has attributed one Support Token to this ActProp.

Scenario:

(The Member executes the **Scenario** 13.1.1 "Display an existing Action Proposal" on the ActProp where she allocated a Support Token

**or** the Member accesses the Screen S7 "My External Supports" and selects a ActProp in the list)

The Member clicks on the Authenticated Vote (§ 3.4.4) action "Take away the Support Token from the selected ActProp".

**If** the Authenticated Vote is validated **then**

- The Infrastructure sends an Acknowledgement of Support Token Modification (AckModifToken) § 4.5.7 to the Member
- the number of Support Tokens of the Type being taken away by the Member is reduced by 1 for the ActProp
- the number of non-attributed Support Tokens for the Member is increased by 1.

**end if**

Data:

§ 4.5.7

Possible future development:

### 13.7.4 Promote the Action Proposal to State D7

The actors:

- the Members whose Distant Topics of Interest match the Indexing Meta-Data of the ActProp.

Pre-requisites:

The ActProp is in State D6 "Final Version of the ActProp validated by the Distributed Control of Compliance with Principles and of Plagiarism Prevention (DCCPPP)"

**and** the number of Support Tokens of Type "Quality of the Solution" is  $\geq$  *MinNbSupport\_XXX* (with XXX the acronym of the Nature of the Action Proposal)

Scenario:

The ActProp switches to State D7 "Final Version of the ActProp validated by a sufficient number of Support Tokens".

The Infrastructure sends to all Members whose Distant Topics of Interest match the Indexing Meta-Data of the ActProp a Notification of Action Proposal Sufficiently Supported (NoteActPropSupported) § 4.3.21.

Data:

§ 4.3.21.

Possible future development:

### **13.7.5 Demote the Action Proposal to State D6**

The actors:

- the Members whose Distant Topics of Interest match the Indexing Meta-Data of the ActProp.

Pre-requisites:

The ActProp is in State D7 "Final Version of the ActProp validated by a sufficient number of Support Tokens"

**and** the number of Support Tokens of Type "Quality of the Solution" is  $< MinNbSupport\_XXX$  (with XXX the acronym of the Nature of the Action Proposal)

Scenario:

The ActProp switches to State D6 "Final Version of the ActProp validated by the Distributed Control of Compliance with Principles and of Plagiarism Prevention (DCCPPP)".

The Infrastructure sends to all Members whose Distant Topics of Interest match the Indexing Meta-Data of the ActProp a Notification of Action Proposal Insufficiently Supported (NoteActPropInsuffSupport) § 4.3.22.

Data:

§ 4.3.22

Possible future development:

### **13.7.6 Warn that an Action Proposal is insufficiently supported**

The actors:

- the Members whose Distant Topics of Interest match the Indexing Meta-Data of the ActProp.

Pre-requisites:

The ActProp is in State D6 "Final Version of the ActProp validated by the Distributed Control of Compliance with Principles and of Plagiarism Prevention (DCCPPP)"

**and** the condition given in Table § 9.1, line *WarnActPropInsuffSupport*, is verified.

Scenario:

The Infrastructure sends to all Members whose Distant Topics of Interest match the Indexing Meta-Data of the ActProp a Warning for Action Proposal Insufficiently Supported (WarnActPropInsuffSupport) § 4.3.23.

Data:

§ 4.3.23

Possible future development:

### **13.7.7 Take an Implementation Decision**

The actors:

- one Implementer

- the Members who had allocated a Support Token to the ActProp
- the Members whose Distant Topics of Interest match the Indexing Meta-Data of the ActProp.

Pre-requisites:

The ActProp is in State D7 "ActProp sufficiently supported".

Scenario:

The Implementer enters Screen SNP5 "Take an Implementation Decision on a sufficiently supported Action Proposal", and selects in the list the Action Proposal on which she takes her Implementation Decision.

The Implementer decides whether to Implement or to Reject the Action Proposal, and provides the information required for the Notification of Implementation Decision (NoteImplDec), described in § 4.3.24.

**If** the Implementation Decision is positive,

- **then** the Action Proposal is promoted to State D8 "Action Proposal being Implemented"
- **else** it is demoted to State D98 "Process stopped"

**Endif.**

The Infrastructure sends a Notification of Implementation Decision (NoteImplDec), described in § 4.3.24 to all Members whose Distant Topics of Interest match the Indexing Meta-Data of the ActProp and to all Members who had allocated a Support Token to the ActProp.

Data:

§ 4.3.24.

Possible future development:

The Implementation Decision is taken by a vote among Implementers.

Each Implementer provides a feedback on the Action Proposal before an Implementation Decision is taken.

There are several categories of Implementers: "standard" Implmenters provide their feedback, and "super" Implementers take the Implementation Decision (or report on the Implementation Decision taken elsewhere). This can be useful in the case of Parliaments, where each Member of Parliament can provide a feedback and his opinion on the Action Proposal as an "standard" Implementer, and a civil servant reports on the official vote result as a "super" Implementer.

## 13.8 End the production process

### 13.8.1 Place the Action Proposal into State D98

The actors:

- the Active Participants in the Working Group.

Pre-requisites:

The condition given in Table § 7.3, line (D2; D98), is verified  
**or** the condition given in Table § 7.3, line (D3, D4; D98), is verified  
**or** the condition given in Table § 7.3, line (D6; D98), is verified.

Scenario:

The Infrastructure places the Action Proposal in State D98.

The Infrastructure stores the Current Date as the date of the transition in State D98 in the Trace of the Production Process of the ActProp.

The ActProp is stored and may be read by Members and Followers (State D98).

The Infrastructure sends to all Active Participants in the WkGrp a Process Stop Notification (ProcStopNote) § 4.3.25, with the Motive of the Production Process stop and the Data

justifying this stop according to the event having caused the stop.

**For each** Active Participant in the WkGrp, the Infrastructure applies the **scenario** 12.2.10 "Mark the technical competence and behaviour of other Members"

The Working Group is dissolved.

Data:

§ 4.3.25

Possible future development:

### 13.8.2 Place the Action Proposal into State D99

The actors:

- the Active Participants in the Working Group.

Pre-requisites:

The decision by the Distributed Moderation is "Reject"

**or** the decision by the Distributed Control of Compliance with Principles and Plagiarism Prevention is "Reject".

Scenario:

The Infrastructure places the Action Proposal in State D99.

The Infrastructure stores the Current Date as the date of the transition in State D99 in the Trace of the Production Process of the ActProp.

The ActProp is stored and may be read by Members only (State D99).

The Infrastructure sends to all Active Participants in the WkGrp a Process Stop Notification (ProcStopNote) § 4.3.25, with the Motive of the Production Process stop and the Data justifying this stop according to the event having caused the stop.

**For each** Active Participant in the WkGrp, the Infrastructure applies the **scenario** 12.2.10 "Mark the technical competence and behaviour of other Members"

The Working Group is dissolved.

Data:

§ 4.3.25

Possible future development:

## 14 Internal messaging

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### 14.1 Display lists of Internal Messages

#### 14.1.1 Display the Inbox

The actors:

- the Member or the Follower

Pre-requisites:

None other than those described in § 10.

Scenario:

The Member or the Follower accesses Screen S10: "My Internal Messaging" § 8.2.10 and clicks on the "Inbox" action.

The Infrastructure displays the list of Internal Messages received by the Member or the Follower, in decreasing chronological order.

The Member or the Follower clicks on the actions "Sort the messages by ascending chronological order / by (ascending / descending) alphabetical order of sender Pseudonym / by (ascending / descending) alphabetical order of Subject".

Data:

§ 8.2.10

Possible future development:

Separate lists for:

- personal Internal Messages (= received from other Members or Followers)
- Authenticated Internal Messages (= received from the Infrastructure).

Separate lists, within the Authenticated Internal Messages, for:

- Notifications
- Warnings
- each Working Group of which the Member is an Active Participant
- the Working Groups of which the Member or the Follower is an Observer.

#### 14.1.2 Display the Draft Messages

The actors:

- the Member or the Follower

Pre-requisites:

None other than those described in § 10.

Scenario:

The Member or the Follower accesses Screen S10: "My Internal Messaging" § 8.2.10 and clicks on the "Draft Messages" action.

The Infrastructure displays the list of Internal Messages stored by the Member or the Follower without being sent, in decreasing chronological order of last storage.

The Member or the Follower clicks on the actions "Sort the messages by ascending chronological order / by (ascending / descending) alphabetical order of sender Pseudonym / by (ascending / descending) alphabetical order of Subject".

Data:

§ 8.2.10

Possible future development:

### 14.1.3 Display the Sent Messages

The actors:

- the Member or the Follower

Pre-requisites:

None other than those described in § 10.

Scenario:

The Member or the Follower accesses Screen S10: "My Internal Messaging" § 8.2.10 and clicks on the "Sent Messages" action.

The Infrastructure displays the list of Internal Messages sent by the Member or the Follower, in decreasing chronological order of sending date.

The Member or the Follower clicks on the actions "Sort the messages by ascending chronological order / by (ascending / descending) alphabetical order of sender Pseudonym / by (ascending / descending) alphabetical order of Subject".

Data:

§ 8.2.10

Possible future development:

## 14.2 Write Internal Messages

### 14.2.1 Write a new Internal Message

The actors:

- the Member or the Follower writing the Internal Message
- the Member(s) or the Follower(s), destination(s) of the Internal Message

Pre-requisites:

None other than those described in § 10.

Scenario:

The Infrastructure displays a form containing the "Subject" field, the "Destination" field (i.e. the Members or the Observers to which the Internal Message is to be sent), and the "Text" field of the Internal Message.

The Member or the Follower fills in at least the "Destination" fields and clicks on the actions "Store" or "Send".

**If** the action is "Store"

**then** the Infrastructure stores the Internal Message in the list of "Draft messages",

**else** the Infrastructure:

- places the Internal Message in the list of "Sent Messages" of the Member or the Follower writing the Internal Message
- places a copy of the Internal Message in the Inbox(es) of the Member(s) or the Follower(s), destination(s) of the Internal Message

**end if.**

Data:

Possible future development:

### 14.2.2 Write an Internal Message from scratch

The actors:

- the Member or the Follower

Pre-requisites:

None other than those described in § 10.

Scenario:

The Member or the Follower accesses Screen S10: "My Internal Messaging" § 8.2.10 and clicks on the action "Write a new Internal Message".

The Infrastructure performs the **scenario** 14.2.1 "Write a new Internal Message".

Data:

§ 8.2.10

Possible future development:

### 14.2.3 Write an Internal Message from an existing one

The actors:

- the Member or the Follower

Pre-requisites:

None other than those described in § 10.

Scenario:

The Member or the Follower performs one of the **scenarios** 14.1.1 to 14.1.3 and selects one existing Internal Message.

The Infrastructure performs the **scenario** 14.2.1 "Write a new Internal Message".

Data:

Possible future development:

Write an Internal Message to a Contact.

Write an Internal Message to a Mailing List.

Write an Internal Message to all Active Participants in a Working Group.

Write an Internal Message to all Active Participants and all Observers in a Working Group.

Delete Internal Messages:

- place Internal Messages in the Dustbin;
- remove Internal Messages from the Dustbin
- empty the Dustbin.

## 14.3 Manage Contacts and Mailing Lists

### 14.3.1 Record a new Contact

The actors:

- the Member or the Follower

Pre-requisites:

The Member or the Follower has selected one existing Internal Message (through one of the **scenarios** 14.1.1 to 14.1.3)

**or** the Member or the Follower has selected one existing ActProp (through one of the **scenarios** 13.1.1 or 13.1.2)

Scenario:

The Member or the Follower selects a Member or an Observer in the list of Destinations of the Message or in the list of Active Participants and Observers in the Working Group.

The Member or the Follower clicks on the action "Add as new Contact".

The Infrastructure displays a form containing the "Nickname of the new Contact" and the existing Mailing Lists.

The Member or the Follower fills in the form with the Nickname of the new Contact and selects the Mailing List(s) to which the new Contact is allocated.

Data:

Possible future development:

### 14.3.2 Create a new Mailing List

The actors:

- the Member or the Follower

Pre-requisites:

None other than those described in § 10.

Scenario:

The Member or the Follower accesses Screen S10: "My Internal Messaging" § 8.2.10 and clicks on the action "Create a new Mailing List".

The Infrastructure displays a form with the "Name of the new Mailing List".

The Member or the Follower fills in the form with the Name of the new Mailing List.

The Member or the Follower accesses Screen S10: "My Internal Messaging" § 8.2.10 and clicks on the action "Display my existing Contacts".

The Member or the Follower selects the Contacts that she wants to allocate to the new Mailing List and clicks on the action "Add to the Mailing List".

Data:

Possible future development:

### 14.3.3 Display existing Contacts

The actors:

- the Member or the Follower

Pre-requisites:

None other than those described in § 10.

Scenario:

The Member or the Follower accesses Screen S10: "My Internal Messaging" § 8.2.10 and clicks on the action "Display existing Contacts".

The Infrastructure displays a list containing:

- all Contacts that the Member or the Follower had recorded using **scenario** 14.3.1 "Create a new Contact"
- all Active Participants and Observers of all Working Groups of which she is an Active Participant or an Observer.

Data:

Possible future development:

### 14.3.4 Display existing Mailing Lists

The actors:

- the Member or the Follower

Pre-requisites:

None other than those described in § 10.

Scenario:

The Member or the Follower accesses Screen S10: "My Internal Messaging" § 8.2.10 and clicks on the action "Display existing Mailing Lists".

The Infrastructure displays a list containing:

- all Mailing Lists that the Member or the Follower had recorded using **scenario** 14.3.2 "Create a new Mailing List"



- one Mailing List for the Active Participants, one Mailing List for the Observers of all Working Groups of which she is an Active Participant or an Observer.

Data:

Possible future development:

#### **14.3.5 Delete an existing Contact**

The actors:

- the Member or the Follower

Pre-requisites:

None other than those described in § 10.

Scenario:

The Member or the Follower performs **scenario** 14.3.3 "Display existing Contacts".

The Member or the Follower selects one or several Contacts of the list, among those that she created using **scenario** 14.3.1 "Create a new Contact". The Active Participants or Observers of the Working Groups of which the Member or the Follower is an Active Participant or an Observer are not selectable.

The Member or the Follower clicks on the action "Delete as Contact".

Data:

Possible future development:

#### **14.3.6 Delete an existing Mailing List**

The actors:

- the Member or the Follower

Pre-requisites:

None other than those described in § 10.

Scenario:

The Member or the Follower performs **scenario** 14.3.4 "Display existing Mailing Lists".

The Member or the Follower selects one or several Contacts of the list, among those that she created using **scenario** 14.3.2 "Create a new Mailing List". The Mailing Lists made of the Active Participants or Observers of the Working Groups of which the Member or the Follower is an Active Participant or an Observer are not selectable.

The Member or the Follower selects the action "Keep the content of the Mailing List as Contacts" or the action "Delete all Contacts contained in the Mailing List".

The Member or the Follower clicks on the action "Delete as Mailing List".

The Infrastructure deletes the Mailing List and manages the Contacts contained in the Mailing List according to the action selected by the Member or the Follower. Whatever the action selected by the Member or the Follower, the Active Participants or Observers of the Working Groups of which the Member or the Follower is an Active Participant or an Observer are kept as Contacts.

Data:

Possible future development:

### **14.4 Mass download of Authenticated Internal Messages**

The actors:

- the Member

Pre-requisites:

None other than those described in § 10.

Scenario:

The Member accesses Screen S10: "My Internal Messaging" § 8.2.10 and clicks on the action "Mass download of Authenticated Internal Messages".

The Member selects the action "Keep the Authenticated Internal Messages in the Inbox" or "Delete the Authenticated Internal Messages from the Inbox".

The Infrastructure:

- proposes to select the place on the Member's hard disk where the Authenticated Internal Messages will be downloaded,
- downloads to the hard disk of the Member all Authenticated Internal Messages that are in the Inbox in the form of a compressed file.

The Infrastructure keeps or deletes the Authenticated Internal Messages in the Inbox according to the action selected by the Member.

Data:

Possible future development:

Selective download of the Authenticated Internal Messages of a specific Working Group.

## 15 Further specification work

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The following functions have not been specified in a scenario-based fashion, and remain to be done:

- Other Natures of Action Proposals, beyond the Investment Proposal § 4.5.
- Resignation as a Member, a Follower and a Natural Person § 4.2.11 to 4.2.13.
- Distributed White Pages § 4.2.36 and § 5.2.
- Management of Members §4.2.37, § 5.3 and § 6.
- Proposal to modify the KuneAgi software § 4.3.29.
- List of best contributors and of best supported Action Proposals § 8.2.8.
- Changes in Numeric Constants and download of the complete database § 8.2.9.
- On-Line Help § 8.2.13.

In addition, some other functions were called for in the market study [2], and need to be specified.

## 16 Reference documents

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- [1] Specifications present on the "Launchpad" site  
<https://blueprints.launchpad.net/kuneagi>
- [2] KuneAgi. Synthèse de l'étude de marché. 21 novembre 2012.

## 17 Proposition of Usage Recommendations

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### This chapter is a draft deserving to be completed ###

Ce chapter presents formal recommendations addressed to the users of the Infrastructure, in order to improve the quality of their common work. These recommendations are displayed and are easily reachable on the Screen S9 (as described in § 8.2.9), so that every user may refer to them during the on-line debates and discussions. They may be used to convince a Member to modify his ActProp.

### 17.1 Recommendations for the debates in the Working Groups

The debates in the Working Groups are supposed to be an exchange of **arguments**, aiming at **convincing** the other Members of the appropriateness of the produced texts, that is, at changing their opinion, in the respect of others and of self, without manipulation.

Specifically, during the discussion on an Action Proposal (or on a Substantial Amendment), and in the Justification of its Content, each Member takes care to:

- remain **in the subject**
- have the debate concerning the Action Proposal to bear on its **technical validity** (is the proposed objective reached? what are the consequences of the proposed action?) or its **moral legitimacy** (is this good or evil? why?), but not on its political correctness or suitability (what will people / the media / the tabloids say? in the polls, it is said that...)
- speak **en her own name**, *intuitu personae*, according to her own convictions. Do not claim to be the advocate or the interpreter of an interests group, a population category or even less of "people" in general...
- specify the **nature** of the personal, family, professional or associative **experience** and **background** that he invokes to support his assertions (where he speaks from)
- **cite** the **external sources**, and provide the relevant hypertext link, to support her assertions, when they are in the order of truth or of fact (statement of a situation, effectiveness of an action)
- **cite** her **internal sources**, when she re-uses or modifies one (or several) existing Action Proposal(s) under Production
- cite the precise paragraph of the Collective's **Principles** that the Action Proposal attempts to embody, or that an element of Action Proposal contradicts, when the argument bears upon the compliance or not of the text to these Principles
- not to connect the Action Proposal to **political labels** or doctrines, should this be to exclude from the debate or to protect from contestation, even if an analogue of the Action Proposal is present in the programme or the intellectual patrimony of a political party, whatever it may be.
- have potential criticism or praise to bear on the **Action Proposals** and the **arguments**, but not on the persons (judgement on persons is possible through the Mutual Marking system described in § 8.4)
- justify her **comparisons**, analogies and metaphors
- justify the **alternatives** that he presents between several terms when a choice is to be made: why the choice between these terms and why are other terms not present.

## 17.2 Recommendations for the redaction of Public Policy Proposals

The **Titles** of Public Policy Proposals (PPP) refer to an **action** that the Working Group wishes a public body to undertake (cf. full definition in § 1). They therefore contain a **verb** in the **active** mode. For ex: "Build the high-speed rail tunnel Lyon Turin". They avoid hollow formulae such as "give a greater place to", "defend" or "(fully) recognise"... On the other hand, those actions that are specifically public, such a "create / suppress a tax", "regulate", commit a specific infrastructure investment or operating costs spending, "forbid", "authorise", "render compulsory", etc. are fully valid.

The **Summary** of a Public Policy Proposal contains :

- the issue to address, the problem to solve or the desirable state to reach
- the action recommendation
- the public authority in charge
- and potentially the justification of this recommendation.

The spreadsheet file for the justified **Estimation** of **budgetary costs** or of **income** (described in §4.5.6) contains elements of comparison with reference values, such as:

- Gross Domestic Product of selected Member States and of the whole European Union
- Public budget of selected Member States in the European Union and of the Union
- Average public budget of a NUTS-2 administrative unit
- Average public budget of a NUTS-3 administrative unit
- Average public budget of a city of 100 000 inhabitants.

These comparison elements may be pre-filled.

## 18 Proposed default values for Numeric Constants

Name of the Numeric Constant	Meaning of the Numeric Constant	Paragraph of the document where the Constant is defined	Proposed default value
TRegister	Duration for which the provisional Pseudonym and Password of the newly Authenticated Natural Person will remain valid	4.2.7	4 days
TValidCreditCode	Duration for which the code incrementing the Time Credit remains valid.	11.2.2	24 hours
FreeTimeCredit	Initial value of the Time Credit upon initial Registration of a Member = the Time Credit given to him for free to experiment with the Infrastructure before having to contribute for its maintenance and update	4.2.3	3 months
Price3Months	Price for a 3-months Time Credit Increment	8.2.1	3 EUR
Price6Months	Price for a 6-months Time Credit Increment	8.2.1	5.50 EUR
Price12Months	Price for a 12-months Time Credit Increment	8.2.1	10 EUR
Price24Months	Price for a 24-months Time Credit Increment	8.2.1	18 EUR
QualifMajThresh	Threshold defining the Qualified Majority in the Collective Decision of a WkGrp	4.2.16	2/3 (i.e. 0,66667)
QuorumVote	Threshold defining the quorum for a Qualified Majority Collective Decision in a WkGrp	4.2.16	2/3 (i.e. 0,66667)
MaxNbActWkGrp	Maximal number of Working Groups (WkGrp) of which a given Member may be an Active Participant at a given time	4.2.3	5
MaxTInactMb	Inactivity duration after which the Member loses her status of Active Participant in the Working Group (WkGrp)	4.2.3	30 days
MaxNbSuppTok ( <i>not directly modifiable</i> )	Maximal number of Action Proposals (ActProp) to which a Member may allocate her Support	4.2.3	Min (MaxNbSuppTok_1 ; Number of PPP in

<b>Name of the Numeric Constant</b>	<b>Meaning of the Numeric Constant</b>	<b>Paragraph of the document where the Constant is defined</b>	<b>Proposed default value</b>
	Token		the State D6 or D7 / MaxNbSuppTok_2)
MaxNbSuppTok_1			20
MaxNbSuppTok_2			3
MinNbWkGrp_PPP	Minimal number minimal of Active Participants necessary for a Working Group (WkGrp) to be "Active" in the production of Public Policy Proposals	4.2.17	7
MinNbWkGrp_ElectProg	Minimal number minimal of Active Participants necessary for a Working Group (WkGrp) to be "Active" in the production of an Electoral Programme	4.2.17	1
MinNbWkGrp_InvestProp	Minimal number minimal of Active Participants necessary for a Working Group (WkGrp) to be "Active" in the production of an Investment Proposal	4.2.17	5



<b>Name of the Numeric Constant</b>	<b>Meaning of the Numeric Constant</b>	<b>Paragraph of the document where the Constant is defined</b>	<b>Proposed default value</b>
MaxNbWkGrp	Maximal number of Active Participants in a single Working Group (WkGrp)	4.2.17	20
MaxNbCharTitle	Maximal number of characters in the Title of a ActProp	4.3.12	100
MaxNbCharSumm	Maximal number of characters in the Summary of a ActProp	4.3.12	750
MaxNbPPFields	Maximal number of Public Policy fields within the list provided in § 4.5.5 that may be selected to define the Public Policy Domain to which a PPP relates	4.5.5	4
TOffReg	Duration between the end of the Candidate Designation Vote and the official registration date for the political elections	4.6.6	2 days
TVoteCandDesign	Duration between the start and the end of the Candidate Designation Vote	4.6.6	15 days
TWarning	Duration of advance notice for the Warnings	9.1	15 days
MaxTNoAgree	Maximal duration during which a Working Group may remain without having agreed on a new Current Version of the ActProp	7.3	60 days
NbVotSupp_ElectProg	Number of Schulze Ballots available to a Member for each pair (Election Category; Election Date)	4.6.4	3
MaxTInactWkGrp	Maximal duration during which a Working Group may remain in the "Inactive" State (State G1 of §7.2)	7.3	60 days
TVote_PPP	Duration during which the votes are gathered for a Collective Decision on a Public Policy Proposal	7.3	7 days
TVote_ElectProg	Duration during which the votes are gathered for a Collective Decision on an Electoral Programme	7.3	2 days
TVote_InvestProp	Duration during which the votes are gathered for a Collective Decision on an Investment Proposal	7.3	7 days
TAauthent	Duration given to the potential new Member for him to transmit the	4.2.5	10 days

Name of the Numeric Constant	Meaning of the Numeric Constant	Paragraph of the document where the Constant is defined	Proposed default value
	necessary information to the Members in charge of the Distributed Authentication		
TDecAuthent	Duration given to the Members in charge of the Distributed Authentication to express their vote, and after which their vote will by default be considered as positive	4.2.5	10 days
TQuarantine	Duration during which the Personal Data of a former Member are kept, and during which he cannot register again in the Infrastructure	5.1.1	6 months
MinNbSupport_PPP <i>(not directly modifiable)</i>	Minimum number of Support Tokens of Type "Quality of the Solution" that a ActProp for Public Policy Proposal (PPP) must receive to be validated (i.e. to reach State D7 described in § 7.1)	7.3	Min (MinNbSupport_PP P_1; total number of Members / MinNbSupport_PP P_2)
MinNbSupport_PPP_1			100
MinNbSupport_PPP_2			2
MinNbSupport_Invest Prop <i>(not directly modifiable)</i>	Minimum number of Support Tokens of Type "Quality of the Solution" that a ActProp for Investment Proposal must receive to be validated (i.e. to reach State D7 described in § 7.1)	7.3	Min (MinNbSupport_In vestProp_1; total number of Members / MinNbSupport_Inv estProp_2)
MinNbSupport_Invest Prop_1			50
MinNbSupport_Invest Prop_2			2
QuorumSupport_Elect Prog <i>(not directly modifiable)</i>	Minimum number of Schulze Ballots that a Candidate Designation Processor must receive for a candidate (and her Electoral Programme) to be officially designated by the Collective in a political election (i.e. to reach State D7 described in § 7.1)	7.3	Min (QuorumSupport_E lectProg_1; total number of Members / QuorumSupport_El ectProg_2)
QuorumSupport_Elect Prog_1			50
QuorumSupport_Elect Prog_2			20
MaxTNoSupp	Maximal duration during which a ActProp may remain without being supported by the minimal number of Support Tokens	7.3	180 days

<b>Name of the Numeric Constant</b>	<b>Meaning of the Numeric Constant</b>	<b>Paragraph of the document where the Constant is defined</b>	<b>Proposed default value</b>
NbMaxDownLoad	Maximal number of downloads of ActProp allowed per day	8.2.5	1
TValid	Duration given to Members in charge of Distributed Moderation or of Distributed Control of Compliance with Principles and of Plagiarism Prevention for them to vote on the ActProp. If they do not express a vote, this vote is positive by default.	7.3	15 days
DistribAuthent	Boolean variable describing whether the Distributed Authentication of new Members is operational	5.1.1	TRUE
NbDistribAuth	Number of Members mobilised for the Distributed Authentication of new Members	5.1.1	5
NbDistribWP	Number of Corresponding Natural Persons in the Distributed White Pages	5.2	5
NbDistribModer	Number of Members mobilised for the Distributed Moderation of ActProp	7.4	3
NbDistribCCPPP	Number of Members mobilised for the Distributed Control of Compliance with Principles and of Plagiarism Prevention of ActProp	7.4	5
TPeriodCleanUp	Duration between two successive Period Clean-Ups of the database of Natural Persons	5.3	90 days
TEvictNatPerson	Duration after which a Natural Person is erased from the database if she does not log in.	5.3	30 days
TValidCAPW	Duration of validity of a given Common Access Password, after which it must be re-generated	6.1	1 calendar month
TTransmitCAPW	Duration needed for the newly generated Common Access Password to reach all legitimate members of the organisation	6.1	5 days
TEvictMember	Duration after which a Member is evicted from the Infrastructure if he did not log in.	6.2	90 days

## 19 Glossary of acronyms and of specific terms

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### This chapter is a draft deserving to be completed ###

### 19.1 Acronyms

SubstAmend: Substantial Amendment

FormAmend: Formal Amendment

DCCPPP: Distributed Control of Compliance with Principles and of Plagiarism Prevention

REAI: Report on Exchange of Arguments and Information

ActProp: Action Proposal

ActScale: Action Scale

WkGrp: Working Group

GeoLoc: Geographic Location

PPP: Public Policy Proposal

InvestProp: Investment Proposal

ElectProg: Electoral Programme of a Member wishing to be the official candidate of the Collective in political elections.

### 19.2 Specific terms

Some words of ordinary use are employed in the present document in a specific meaning, slightly distinct from the usual one. They are in this case written with an upper case initial, and their exact meaning is provided hereafter and in the course of the present specification.

**Collective:** The group or people made of the Members whose existence and uniqueness were validated by the Distributed Authentication procedure of the Infrastructure (§ 5.1.3). The Collective is a group of humans whose only cohesion source is the existence of the Infrastructure that binds them and with which they work co-operatively on the production of Action Proposals. The Collective does therefore not need to have a legal existence (but this does not prevent the Members to set up a legal entity independently, for example to bear the costs of the Infrastructure hosting).

**Infrastructure:** An instance of the KuneAgi software, implemented on an Internet or Intranet server.

## 20 Translation of key specific terms

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This chapter translates the key specific terms of the KuneAgi software in some European languages, as a preparation for the localisation of the software in various linguistic environments.

<b>English</b>	<b>Français</b>	<b>Deutsch</b>
Working Group	Groupe de Travail	Arbeitsgruppe
Action Proposal	Proposition d'Action	Aktionsvorschlag
Member	Adhérent	Mitglied
Follower	Sympathisant	
Active Participant	Membre Actif	Aktiver Teilnehmer
Observer	Observateur	Beobachter
Public Policy Proposal	Proposition de Politique Publique	Vorschlag für Öffentliche Politik
Local Group Whiteboard	Tableau Blanc de Groupe Local	
Investment Proposal	Proposition d'Investissement	Investitionsvorschlag
Electoral Programme	Profession de Foi	Wahlprogramm
Public Declaration	Déclaration Publique	Öffentliche Erklärung
Formal Amendment	Amendement de Forme	
Substantial Amendment	Amendement de Fond	
Topic of Interest	Centre d'Intérêt	Interesse