



World Class Standards

Autonomic network engineering for the self-managing Future Internet (AFI ISG)

URL: <http://portal.etsi.org/afi>

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AFI ISG (Industry Specification Group)



AFI ISG?

- ❑ **ETSI Industry Specification Group for Autonomic network engineering for the self-managing Future Internet (AFI ISG)**

- ❑ **An ETSI pre-standardization group**
 - **Developing ETSI Group Specifications (GS)**

- ❑ **Created January 2009**

- ❑ **1st meeting: 26-27 February 2009**

- ❑ **Driven by partners of EFIPSANS project**
 - **EFIPSANS has no special authority over group – open to all**

Rationale

- What is the current perception concerning Network Evolution towards Future Internet?
 - Background: **Many of all the key industrial players and other stakeholders seem to be very much** in favor of hearing about evolution paths for today's network models and paradigms, than revolutionary approaches, for reasons which are very well-known.
e.g.:
 1. **the huge costs associated with any revolutionary undertaking,**
 2. **the fear of jeopardizing proven and well satisfying business models,**
 3. **the fear of drowning into complex technologies that might at the end of the day prove to be difficult to test, validate, maintain and even trust, etc.**

Rationale

- There is an urgent need to involve key players in the networking community to quickly join and contribute in the call for the Self-Managing Future Internet (2 things must happen soon)
 1. **The definition/development of a Reference Model of a holistic Generic Autonomic Network Architecture (GANA) that defines the autonomic elements and the self-manageability properties of the Future Internet. For this, researchers from both, the evolutionary approaches and the revolutionary approaches, should be involved in creating the Reference Model.**
 2. **The definition of a viable Roadmap of an Evolution Path for today's network models, protocols such as IPv6, and paradigms as necessitated by the Reference Model. The roadmap should include implementation issues such as the appropriate systems engineering methodologies for autonomic networking software/systems, estimations of the cost of evolving today's network models and protocols, etc.**

Rationale

- ❑ Why establishing the ISG in a well-established Standardization Body
 - **There is actually** a critical need to find ways to reach out and attract **a large base of most of the** key industrial players who are currently members of the well established Standardization Bodies.
 - **Experience has shown that most industrial players have extensive knowledge, regarding** the design of architectures that meet performance and scalability demands required of production networks.

Scope, Structure of the AFI ISG and Duration

- **The Autonomic Network Engineering for the Self-Managing Future Internet** will develop ETSI pre-standard specifications for Autonomic Network Engineering for the Self-Managing Future Internet, including the following activities:
 - **Sub-Group 1: Development of a Reference Model of a holistic Generic Autonomic Network Architecture (GANA)**
 - **Sub-Group 2: Development of the GANA Meta-Model associated with the Reference Model.**
Development of Advanced Methodologies for the engineering of Context-aware autonomic Decision-Making-Elements (DMEs) of GANA, their Control-Loops, Interfaces, etc,
 - **Sub-Group 3: Definition of a viable roadmap for an Evolution Path for today's network models, protocols e.g (IPv6 Protocols) and paradigms as necessitated by the Reference Model.**



Envisioned Liaisons

- IETF
- ACF (Autonomic Communications Forum)
- IRTF
- ETSI TISPAN
- 3GPP
- NGMN
- Other relevant Working Groups and Fora



Scope of activity includes

- ❑ Inviting contributions from both the evolutionary and revolutionary approaches to Future Internet design
- ❑ Definition of a Reference Model of a Generic Autonomic Network Architecture (GANA)
 - Defining the autonomic elements and the associated self-manageability properties of the Future Internet
- ❑ Defining *Interfaces for Governance*
- ❑ Development and pre-standardization of the GANA Meta-Model, Information Models and Policy-based Control Frameworks
- ❑ Development of Advanced Systems Engineering Methodologies for the engineering of conflict-free Context-aware autonomic Decision-Making-Elements (DMEs)
- ❑ Definition of a **viable roadmap of an evolutionary path** for today's network models, architectures, protocols.

Work Items started so far

- ❑ **AFI Work Item (WI) #1: Scenarios, Use Cases, and Requirements for Autonomic/Self-Managing Future Internet. WI Leader: France Telecom (the Rapporteur).**

- ❑ **AFI Work Item (WI) #2: Generic Autonomic Network Architecture (GANA) WI Leader: Alcatel-Lucent (the Rapporteur).**
 - **Open for contributions from current and new members**
 - **More Work Items can be created.....**
 - **Two Deliverables for the two WIs: ETSI Group Specifications will be produced 2010-05-15 and 2010-08-11 respectively.**

Other details

- Who can participate?**
 - **Any ETSI member organization can become a member of the ISG**
 - **Must sign AFI ISG Agreement**
 - **1-member one vote**
 - **No participation fee**
 - **Any non-member of ETSI (organization, not individual)**
 - **AFI ISG Participant Agreement required**
 - **Full right to contribute, no voting rights**
 - **Per-meeting participation fee**
 - **Must participate regularly to retain electronic access (e-mail list, ftp site)**
- Dedicated Mailing list, ETSI Portal and FTP space**
- Meetings can be at ETSI, or anywhere the ISG chooses**
- Chairman elected at first or second meeting**
- Workplan, meeting dates, published documents etc. available to public**
- IPR Regime: Full ETSI IPR regime applies, with no changes**
 - **For ETSI members, and also non-members who sign Participant agreement**

How to get involved

- ❑ **My organization is a member of ETSI (or has applied):**
 - **Download the ISG Member Agreement at <http://portal.etsi.org/afi>**
 - **Complete the sections marked in green, have 2 copies signed and send both to ETSI (Ultan Mulligan)**
 - **You will receive access to the e-mail list, ETSI portal etc.**
 - ❑ **My organization is not yet a member of ETSI**
 - **Apply for membership and then follow as above**
- Or**
- **Download the ISG Participant Agreement at <http://portal.etsi.org/afi>**
 - **Complete the sections marked in green, have 2 copies signed and send both to ETSI (Ultan Mulligan)**
 - **You will receive access to the e-mail list, ETSI portal etc. when you have registered and paid for 1 meeting**

Further information

- ❑ Please consult <http://portal.etsi.org/afi>
 - Detailed scope and rationale behind the creation of the ISG
 - List of members (expected to grow significantly)
 - Meeting dates
 - Work Programme (list of specifications in the pipe)

- ❑ Contact points:
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