Product Line Working Group Charter

1 PURPOSE

To promote Product Lines Organization and the best related Systems Engineering practices.

In the industry, Systems are more and more often developed to address multiple needs, promoting the reuse of existing components or existing know-how. Setting up new Systems Engineering practices specific to the Product Line Management is being currently generalized.
This generalization does not mean that it is systematically profitable. The Systems Engineering Processes must be adapted to the Product Lines Organization in order to meet the best efficiency.

2 GOAL

The main goals of the Product Lines International Working Group (PL IWG) are:

1. To share experience, good practices and traps to avoid.
2. To acquire Know-How, comparing State-of-Art.
3. To help setup and evolve Product Lines in the Enterprises.
4. To grow the membership of the PL IWG.
5. To provide a professional service to our members through outstanding administration.

3 SCOPE

3.1 PRODUCT LINES SCOPE

Product Lines encompass:

- All types of Systems:
  - in a single system production or in mass production,
  - with a few or a lot of variabilities,
- All types of Market:
  - Needs driven by the market, captured through Market analysis,
  - Very specific needs specified by one Customer;
- All types of Organization:
  - Domain development : systems developed with self funding (investment), to be reused and to meet future needs,
  - Application development for one Customer, then assets Capitalization to be reused;
- All the Processes : whatever the System Engineering Processes, whatever the System Engineering Artifacts (needs, requirements, architecture, integration and tests …),
- All the maturity levels of the Product Line Organization: from Opportunistic practices, through a completely Integrated and Anticipated one
- …

3.2 SCOPE OF THIS EFFORT

Potentially, the Product Lines encompasses all the System Engineering processes and methods, all the System Engineering Artifacts (needs, requirements, architecture, integration and tests, plan …):

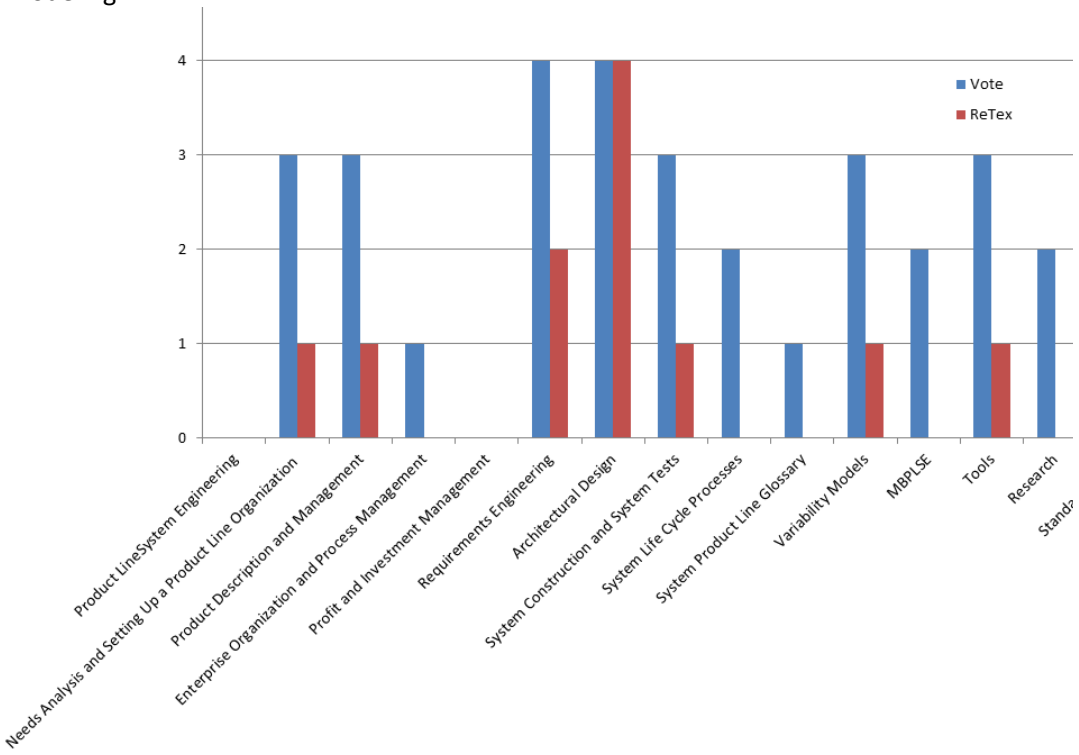
- Technical processes,
- Management processes,
- Support and enabling processes,
- Modeling.

But only the processes and methods specific to Products Lines are in the scope, which can be defined as the tailored "standard" processes adapted to the Product Lines Life cycle.

3.3 SCOPE OF WORKS

The results of the survey conducted in Jacksonville at the end of January 2013 show:

1. A strong interest for the AFIS Product Lines Handbook which needs to be translated into English,
2. An interest for a lot of topics among technical processes, management processes and modeling:



The topics proposed for this survey were the main chapters of the AFIS Product Lines Handbook (AFIS is the French chapter of INCOSE). The questions were:

1. On what topic do you want to work: results in blue bars
2. On what topic have you some experience to share: results on red bars

This survey will to be will be carried out again when the PL IWG will be set up with more members (only 8 forms filled at Jacksonville) and mainly when the topics will be better targeted with the help of the AFIS Product Lines Handbook translation.

4 SKILLS AND EXPERTISE REQUIRED

Implementing a Product Line needs to have a good knowledge of Systems Engineering “standard” practices. It is not the purpose of the PL IWG to explain / explicit the INCOSE SE Handbook.

For the future works it is needed to have people having a good knowledge of:

- The notion of process maturity level (as defined by the SEI).
- The ISO works on ISO 2655x standards.
- The OMG works on the CVL standard (already participating in the AFIS WG).

5 MEMBERS, ROLES AND RESPONSIBILITIES

As decided at Jacksonville, the leader of the PL IWG is Alain Le Put (also leader of the French PL WG).
The other roles and responsibilities will be defined and assigned when the PL IWG will grow up.

6 OUTCOMES (PRODUCTS/SERVICES)

The main outputs for the period are:

- The AFIS Product Lines Handbook transalated into English.
- A Share working space on the INCOSE web site.
- The list of PL IWG members.
- The list and the roadmap of PL works at the IWG level and others WG level.

7 APPROACH

7.1 PRIORITY TASK

As stated during the Jacksonville workshop held on the 28th of January, 2013, the first main task is to translate into English the AFIS Product Lines Handbook.
The requirements for this translation are:

- Get a technical paper of good quality (i.e. translated by a domain expert).
- Get a good quality English document (i.e. corrected by a native English speaking people).
- Ensure the full consistency with the ISO standard not only in the glossary, but all along the document.
- Ensure the translation of all the pictures.
- Having the index and the cross-references.

The AFIS Product Lines Handbook results from the French Chapter works, it addressed the three first goals:

1. To share experience, good practices and traps to avoid as it results from 30 meetings between miscellaneous AFIS PL WG members from the industry and research.
2. To acquire Know-How, comparing State-of-Art as it is the synthesis of the know- how of these members
3. To help setup and evolve Product Lines in the Enterprises as it proposes recommendations to build one's own strategy.

7.2 FIRST EXCHANGES BETWEEN PL IWG MEMBERS

When this Handbook will be translated and distributed to the PL IWG, it will enable a high level exchange between its members and will permit to identify needs of complements that could be brought up by the members.
The way to share information is to be defined, it could be a "wiki" to post questions and answers and mainly to add return of experience; live meetings could be necessary.

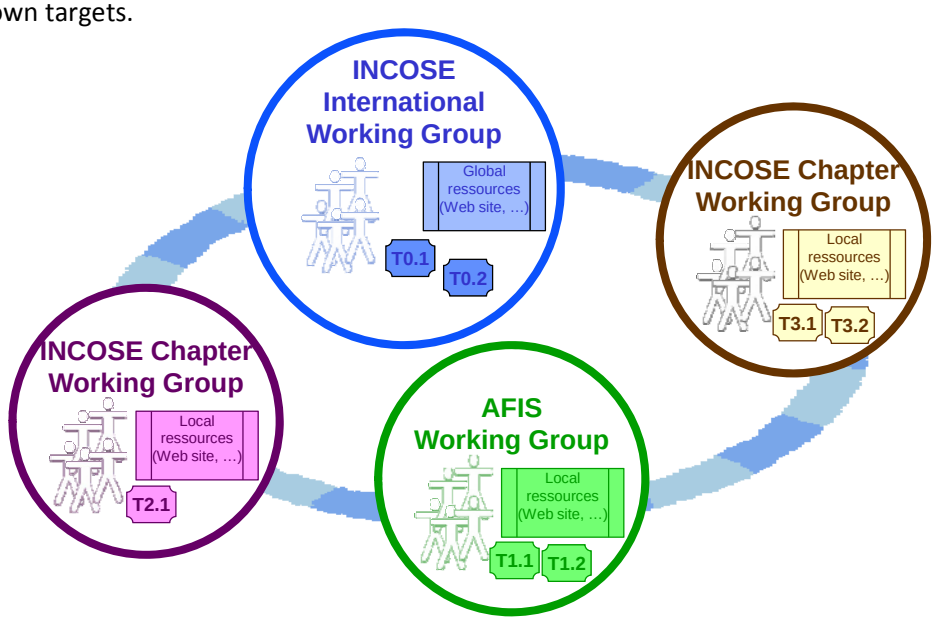
7.3 FUTURE TASKS

After a common vision of PLs will have arisen from these first exchanges, a new survey will be carried out to focus the PL IWG works on specific topics of common interest.

7.4 GENERAL ORGANIZATION

We may have at the same time:

- Common works at the PL IWG level.
- Specific works at the chapter level, for instance the AFIS WG will continue to work on its own targets.



So, it is very important:

- To let the chapters to decide specific works, and to validate their work products.
- organize the synchronization and to ensure the consistency between works: to avoid parallel works and loss of energy, and to ease PL IWG members to work on specific topics even if they are not conducted at the IWG level or in their local chapter.
- To share the results

To achieve this:

- One common detailed list of tasks and associated work products is to be set, updated and made available at the IWG level.
- Main results are to be published at the IWG level (or at least to be announced and presented, in the case of results published locally in a non-English native language, for awareness and possible translation if necessary).

7.5 MAIN RISKS

The translation of the AFIS Product Lines Handbook is the main risk for this PL IWG:

- It is a long and costly task.
- It is a prerequisite to launch other works.

8 MEASURES OF SUCCESS

The main measure will be the availability date of the AFIS Product Lines Handbook turned into English (goals 1 to 3).

Measures of success for the goal 4 are:

- Size of membership.
- Number of enterprises involved in the project.

Measures of success for the goal 5 are:

- Availability date of the Share working space on the INCOSE web site.
- Availability of the list of PL IWG members.
- Availability of the list of PL works at the IWG level and others WG level.

9 RESOURCE REQUIREMENTS

Resources needed from INCOSE are:

- Funding for the translation the AFIS Product Lines Handbook.¤
- Web site for sharing data.
- Microsoft live meetings.

Services are needed from INCOSE for:

- Promoting the PL IWG works.
- Committing new members (and the involvement of other INCOSE chapters).
- Establishing relationship with the ISO and eventually the SEI.

10 DURATION

Typically, the duration of this PL IWG could be long and needs this charter to be renewed at least every year.

This first version of the charter applies only on 2013.

11 SIGNATURES

Established by Alain Le Put, on the 4th of March, 2013
1st Level of Approval
Technical Director, INCOSE Date
2nd Level of Approval (Note this will be added by the INCOSE Technical Director when deemed appropriate.)
Chairman, INCOSE Board of Directors Date

12 REVISION HISTORY

Date	Revision	Description	Author
03/04/2013	0.0	Initial Draft	Alain Le Put