INFORMATION SOCIETIES TECHNOLOGY (IST) PROGRAMME

D.1.2.2: EuPKI 2nd Technical Management Report

Period January 1st – June 30, 2003

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1 Technical board Overview

1.1 Abstract

The purpose of the deliverable D1.2.2 "Technical management Report 2" is to make the point upon all the actions and the decisions which were elaborated by the consortium, during the second period of the activity, from January to June 2003.
Moreover it gives a view of the quality management which has to be taken place, during the development phase and the integration phase, for the acceptance of PKI modules.
This document will progress and be updated all along the project, in order to reflect as much as possible the technical progress of the project.

1.2 Technical Board Overview

1.2.1 Technical Board function

This board is lead by the Technical Manager (D.BONNEROT) and includes a representative from each technical partner. The Technical Board is in charge of the technical development of the project. Problems detected by the Technical Board are be reported to the Steering Board, which has the full responsibility of decision making.

All Work Package Managers, who are responsible for co-ordination of tasks and activities towards the WP objectives, report to the Technical Board about deviations from scheduling, suitability or expected results, designation and co-ordination of tasks leaders.

In order to be very efficient during the Technical Board, the Manager has asked all the members to transmit the technical subjects that they want to discuss one week before. Some time (it was the case for the last technical board), a technical meeting is organized in order to discuss, in detail, some technical points and prepare, if it is possible, the recommendations for the technical board.

1.2.2 Technical work

Except for the WP1 and WP2, the works of all others WP has to be accepted by the technical board.

1.2.2.1 WP3: Requirements

On December 2002, The Steering Board would like to have more information about the legal aspect concerning PKI. WP3 integrated this knowledge into the D3.6 "Definition of the perimeter of the project and requirements".

1.2.2.2 WP5: Implementation

The WP5: "Implementation", led by AXETEL, has been kicked off during the Second Steering Meeting. It is currently drawing action plans and planning the delivery of the modules put in evidence in the D.4.1.

1.2.2.3 WP6: Integration

The WP6: "Integration", led by ON'X, has produced one formal document (D6.1) to explain the way the consortium will or not integrate external PKI modules, the validation process they will have to be submitted to, the sources we could integrate and finally the responsibilities the contributors will have to take.

1.2.2.4 WP7: Demonstration

The WP7: "Demonstration", led by CertiNomis, has produced the first draft of demonstration report in order to define demonstration action

1.3 List of Technical Meetings

The list of the technical meetings is :

- Concerning Technical Boards Meetings:
  - 4th Technical Board Meeting in Paris, at GIP-MDS: 20-21th of March 2003
  - 5th Technical Board Meeting in Paris, at GIP-MDS: 30th of June-1st of July 2003
- Concerning Technical meeting concerning WP5 issues :
  - Meeting in Bucarest in order to meet implementation team of Axetel : 13th of January 2003
  - A phone Call about the schedule of the deliveries of modules: 21st of January 2003
  - Some phone call about the header of the modules and the name of the product : March and April 2003
  - Meeting at GIP-MDS to vote some resolutions about the name of the project : 7th of March 2003

1.4 List of Technical decision

1.4.1 Technical Meeting on January, the 21st

The Participants were :

- GIP-MDS : Alain Roux & Vincent Gass
- CG&EY : Edouard Jeanson (partially)
- ACTIMAGE : Guillaume Dreyer & Christelle Audibert (partially)
- ON-X : Paul-André Pays
- EDF : Ludovic Pietre-Cambacedes (partially)
- CERTINOMIS : Jean-Severin Lair
- AXETEL : Eduard Trick and Calin Lupa Crisan (by mail)
- EADS TELECOM : Eric Choffat and Didier Bonnerot

The Technical Board had taken the following decisions :

- WP3 : Technical Board need to have the schedule about the legal aspect (CG&EY) :
  - The consortium agrees to restrict the study to the legal aspects for the countries where there is a partner
  - CG&EY has not received the official report of the commission
  - One week after receiving this report, CG&EY will propose a action plan
  - CG&EY will send a mail to ask to the partner to send the legal aspect from its country (CG&EY takes into account the French and the CEE legal aspects)
- WP5 :
  - R5.4 :
    - TB ask to have a matrix of consistency between the WP4's documents and WP5's documents :
      - To identify witch modules are used in each Use Case
      - If one module takes into account some functionalities, it is necessary to be sure that each functionality is covered by, at least, one Use Case
    - The technical issues were :
      - Key Ceremony → close
      - FO/BO communication → TB agrees to implement only online support if there is no major effect on the requirement (WP3). In this case FO-2 is removed (WP3,WP4 & WP5 have to verify this point)
      - Certificate Suspension/Reactivation → close
      - Users KGS → close
      - OTP → answer from WP4 → close
      - RA DB → close
      - Operator signature → TB doesn't accept to replace operator signature by operator authentication but agree to restrict the implementation of this functionality to a few platform which one is compatible with a smart card.
      - WP5 has to explain where is integrated the functionalities which are defined into RA-18
    - If WP5 integrates the TB's recommendation (see FO/BO communication, RA-18) and if the consistency between WP4's documents and WP5's documents is complete, the document will be approved
  - R5.5 :
    - The tools and technologies : TB agrees to use Jboss
    - TB agrees about the contents of this document but will not approve it before these two following technical topics are not integrated :
      - the data base : It is necessary to finalize a concrete data model in the databases, i.e. what data are stored, and how are transactions and their states represented in the data bases

        - Security implementation : It is necessary to define the security relationships among the different actors in a scenario and how this is implemented, i.e., how or whether the different client authenticate to the servers etc
    - WP5 will propose an action plan to define these two points (it is necessary for WP6 to have a complete draft before the delivery of the first modules)
  - R5.6 (Internal document) :
    - WP5 has to provide a precise description of the content for deliveries; WP5 would like a formal approval of this document
    - The technical board is not entitled to accept Axetel's requirement about the schedule modification → Steering Board
    - WP5 has to provide a precise description of the content for the following deliveries :
        - First delivery of skeleton
        - Complete delivery of skeleton
        - First delivery of a module
        - Complete delivery of a module
    - After that, WP5 and WP6 has to discuss to be sure that every body understand very well the content of each type of delivery
    - At the end, WP6 has to integrate these informations into its documents R6.x
- CVS organization :
  - There are still some issues about CVS1 because Axetel wants to have a complete mastery of the server (to be root on the machine). This is not compatible with the Actimage's security policy.
  - Today, the CVS1 server is running in Actimage but this is not compatible with Axetel's requirements.
  - TB manager has to discuss about this point with the Project manager
  - Without agreement between Axetel and Actimage, the CVS1 server will still remain in Actimage.
  - TB manager has to discuss about this point with the Project manager

1.4.2 Technical Board on March, the 21st

This Technical Board was devoted to find a solution about the name of the product and the header content of software module (see paragraph 3.2)

1.4.3 Technical Board on June, the 30th

This Technical Board has taken the following decisions :

- The JBOSS version is switched from 3.0.7 to 3.2.1
- Certinomis updates the D.4.3 to avoid inconsistency with D.4.1 on the Key Ceremony issue
- WP5 implements the workflows enhancement policy to improve communication between WP5 & WP6, and documentation of the source code on base on the document produced during the Technical Meeting (see paragraph 3.2.3)

- WP5 gives details of the delivery to come with a solid and unavoidable planning for July the 11th and warns the whole consortium of it
- We put modules of phase 1 on CVS2 before July 22nd (action WP6) provided documentation is available before July 15th (action WP5)
- An updated version of R.6.2 is to be done by July 11th based on latest work and comments

2 Technical Actions and Reports

2.1 GIP-MDS

2.1.1 Technical work accomplished this period

WP/ Task	Actions
WP7	**Demonstration & Evaluation**
T7-1	Prototype plat-form setup - Define the demonstration actions - Describe the tests

2.1.2 Deliverables due this period

WP/ Task	Deliverable	Status (Final, Draft, Pending)
WP7/T7-1	D.7.1 Demonstration Report	Draft

2.2 AQL

2.2.1 Technical work accomplished this period

WP/ Task	Actions
WP5	**Implementation**
T5-1	Development of the components - All components of the first phase - Detailed conception of these modules
WP6	**Integration**
T6-1	Technical Integration Coordination /Architectural Framework Implementation - Coordination of the integration WP activities
T6-2	Preparatory activities : - Initial report (progress report one) - Elaboration of a set of documents (integration guidelines and procedure) - Analysis and initial specifications of the technical tools required - Integration of module coming from WP5

WP8	**Guidelines for Security & Homologation**
T8-2	Stating of the Security requirements - Finalization of the document

2.2.2 Deliverables due this period

WP/ Task	Deliverable	Status (Final, Draft, Pending)
WP5/T5-1	R5.4 « Use case »	Final
WP5/T5-1	R5.5 « Architecture, Design & Implementation »	Final
WP5/T5-1	R5.6 « Delivery Planning Phase 1 »	Final
WP6/T6-1	R6.1 « Integration process overview »	Final
WP6/T6-1	R6.2 « Integration guidelines and acceptance procedures »	Final
WP8/T8-2	D8.2 : "Security functional requirements mapping on modules"	Final

2.3 AXETEL

2.3.1 Technical work accomplished this period

WP/ Task	Actions
WP5	**Implementation**
T5-1	Development of the components - All components of the first phase - Detailed conception of these modules
WP6	**Integration**
T6-1	Technical Integration Coordination /Architectural Framework Implementation - Coordination of the integration WP activities
T6-2	Preparatory activities : - Initial report (progress report one) - Elaboration of a set of documents (integration guidelines and procedure) - Analysis and initial specifications of the technical tools required - Integration of module coming from WP5

2.3.2 Deliverables due this period

WP/ Task	Deliverable	Status (Final, Draft, Pending)
WP5/T5-1	R5.4 « Use case »	Final
WP5/T5-1	R5.5 « Architecture, Design & Implementation »	Final
WP5/T5-1	R5.6 « Delivery Planning Phase 1 »	Final
WP6/T6-1	R6.1 « Integration process overview »	Final
WP6/T6-1	R6.2 « Integration guidelines and acceptance procedures »	Final

2.4 CERTINOMIS

2.4.1 Technical work accomplished this period

WP/ Task	Actions
WP7	**Demonstration & Evaluation**
T7-1	Prototype plat-form setup - Define the demonstration actions - Describe the tests

2.4.2 Deliverables due this period

WP/ Task	Deliverable	Status (Final, Draft, Pending)
WP7/T7-1	D.7.1 Demonstration Report	Draft

2.5 EDF

2.5.1 Technical work accomplished this period

WP/ Task	Actions
WP7	**Demonstration & Evaluation**
T7-1	Prototype plat-form setup - Define the demonstration actions - Describe the tests

2.5.2 Deliverables due this period

WP/ Task	Deliverable	Status (Final, Draft, Pending)
WP7/T7-1	D.7.1 Demonstration Report	Draft

2.6 INTESA

2.6.1 Technical work accomplished this period

WP/ Task	Actions
WP7	**Requirements**
T3-1	Requirements Analysis INTESA has participated to WP3 in order to define the business & organizational model for a PKI implementation starting from our experience as commercial and public CA.

2.6.2 Deliverables due this period

WP/ Task	Deliverable	Status (Final, Draft, Pending)
WP7/T7-1	D.7.1 Demonstration Report	Draft

2.7 CGE&Y

2.7.1 Technical work accomplished this period

WP/ Task	Actions
WP3	**Requirements**
T3-2	Finalization of PKI legal aspect (requirement of the Steering board)

2.7.2 Deliverables due this period

WP/ Task	Deliverable	Status (Final, Draft, Pending)
WP3/T3-2	D.3.6 Definition of the perimeter of the project	Final

2.8 FT R&D

2.8.1 Technical work accomplished this period

WP/ Task	Actions
WP7	**Demonstration & Evaluation**
T7-1	Prototype plat-form setup - Define the demonstration actions - Describe the tests

2.8.2 Deliverables due this period

WP/ Task	Deliverable	Status (Final, Draft, Pending)
WP7/T7-1	D.7.1 Demonstration Report	Draft

2.9 FINSIEL

2.9.1 Technical work accomplished this period

WP/ Task	Actions
WP7	**Demonstration & Evaluation**
T7-1	Prototype plat-form setup - Define the demonstration actions - Describe the tests

2.9.2 Deliverables due this period

WP/ Task	Deliverable	Status (Final, Draft, Pending)
WP7/T7-1	D.7.1 Demonstration Report	Draft

2.10 INPS

2.10.1 Technical work accomplished this period

WP/ Task	Actions

WP7	**Demonstration & Evaluation**
T7-1	Prototype plat-form setup - Define the demonstration actions - Describe the tests

2.10.2 Deliverables due this period

WP/ Task	Deliverable	Status (Final, Draft, Pending)
WP7/T7-1	D.7.1 Demonstration Report	Draft

2.11 Giesecke & Devrient

2.11.1 Technical work accomplished this period

WP/ Task	Actions
WP5	**Implementation**
T5-1	Development of the components - All components of the first phase - Detailed conception of these modules
WP6	**Integration**
T6-1	Technical Integration Coordination /Architectural Framework Implementation - Coordination of the integration WP activities
T6-2	Preparatory activities : - Initial report (progress report one) - Elaboration of a set of documents (integration guidelines and procedure) - Analysis and initial specifications of the technical tools required - Integration of module coming from WP5

2.11.2 Deliverables due this period

WP/ Task	Deliverable	Status (Final, Draft, Pending)
WP5/T5-1	R5.4 « Use case »	Final
WP5/T5-1	R5.5 « Architecture, Design & Implementation »	Final
WP5/T5-1	R5.6 « Delivery Planning Phase 1 »	Final
WP6/T6-1	R6.1 « Integration process overview »	Final

WP6/T6-1	R6.2 « Integration guidelines and acceptance procedures »	Final

2.12 ON-X

2.12.1 Technical work accomplished this period

WP/ Task	Actions
WP6	**Integration**
T6-1	Technical Integration Coordination /Architectural Framework Implementation - Coordination of the integration WP activities
T6-2	Preparatory activities : - Initial report (progress report one) - Elaboration of a set of documents (integration guidelines and procedure) - Analysis and initial specifications of the technical tools required - Integration of module coming from WP5

2.12.2 Deliverables due this period

WP/ Task	Deliverable	Status (Final, Draft, Pending)
WP6/T6-1	R6.1 « Integration process overview »	Final
WP6/T6-1	R6.2 « Integration guidelines and acceptance procedures »	Final

2.13 EADS-TELECOM

2.13.1 Technical work accomplished this period

WP/ Task	Actions
WP6	**Integration**
T6-1	Technical Integration Coordination /Architectural Framework Implementation - Coordination of the integration WP activities
T6-2	Preparatory activities : - Initial report (progress report one) - Elaboration of a set of documents (integration guidelines and procedure) - Analysis and initial specifications of the technical tools required - Integration of module coming from WP5

2.13.2 Deliverables due this period

WP/ Task	Deliverable	Status (Final, Draft, Pending)
WP6/T6-1	R6.1 « Integration process overview »	Final
WP6/T6-1	R6.2 « Integration guidelines and acceptance procedures »	Final

3 Technical issues

3.1 Requirements (WP3)

During the last steering board in Bruxell, the commission do some remarks about the D3.6 which did not explain enough the legal aspect. WP3 completed the last version of the delivery D.3.6 with an overview of this issue. This new version of the document was accepted by the technical board.

3.2 Implementation (WP5)

3.2.1 Header modules

During two months, there was a big issue between Axetel and the others members of the projects about the name of the software and the header of software module. The Technical Board built a solution to continue the project without Axetel but, fortunately, a solution was found. The name of the Software is EUROPEPKI and the final header (license boilerplate) of each module takes this form:

****
Copyright © Axetel – 2003 (info@axetel.com http://www.axetel.com)
All rights reserved

EuropePKI is a libre software which has been developed under European Commission Program referenced IST-2001-34340-EuPKI, on an original idea from Eduard TRIC.

Information about the project can be found at: **http://www.europepki.org/**

EuropePKI and EUPKI are dual licensed: L-GPL & MPL.
For more information, please report to:
http://www.mozilla.org/MPL/MPL-1.1.html
http://www.gnu.org/copyleft/lesser.html.
Software distributed under the License is distributed on an "AS IS" basis, WITHOUT WARRANTY OF ANY KIND, either express or implied. See the License for the specific language governing rights and limitations under the License.
****

3.2.2 The former deliveries and next ones to come

The document R.5.6: "Estimations and delivery planning", written by Axetel is considered as an internal document and describes the new proposal of planning for the continuation of WP5. The future development should be made as much vertically as possible, aiming in the 1st place the successive implementation of functionalities from bottom up rather than building the application layer by layer. This will provide WP6 with material for integration work earlier and in a more distributed way.

On every two weeks, Axetel will send a notification to the consortium mentioning the level of completeness of each module (as a percentage). The target figures associated to each monthly delivery will be provided by Axetel before July 11th.

During the 2nd phases, WP5 will make monthly deliveries (31st of July, 31st of August & 30th of September).

3.2.3 Improvement of documentation

It clearly shows the code was not enough documented to be efficiently integrated by WP6. So it was decided for the next delivery of modules :

- There will be readme files that will contain the mapping between the java source files and the modules names, located either in a separate directory, or even in a source directory. The location may be chosen by Axetel, provided WP6 is informed about it.
- The Javadoc comments must be as meaningful as possible. This doesn't mean that they have to be large, but they have to contain information relevant for reading and understanding the program. For example: the significance of a method's arguments, how it is typically called, if there are some special conditions or circumstances the user must be aware of, etc…
- it is preferable for the tests that need input data that this data is read from a file and not hard coded into the test source. In this way, it's more simple to run the test with other data sets or even create new test cases

3.2.4 The Communication between WP5 & WP6

Beside the official deliveries, there will be weekly interactions (with short summary) between WP5 & WP6.
WP5 can notify WP6 at any point if a significant functionality was added. Also, a discussion list is made available for WP6. The development website provides also a bugtracking system, and the day-to-day task-list.
The deliveries may contain modules that are only partially finished. For this reason WP5 may define the percentage of achievement for each delivered module.

3.2.5 Conclusion

Since December 2002, the main issue of implementation team is the lack of open source PKI modules which are available. WP5 is obliged to develop more than it was planned to do at the beginning of the project. The consequence is the delay for the project. The delivery of the software module was shared in three parts and, at the beginning of July, WP5 will just deliver the first one. Now, it is not possible to be compliance with the schedule about the delivery of the software module (March 2003) and the global schedule of the project (December 2003) because WP5 is only able to finish the development of the software modules on November. Globally, the project needs to have 4 months more in order to be able to reach its goal.

3.3 Integration

3.3.1 Blocking situation

WP6 has not had integration activities since the code is not documented and the header was not correct but finally started the operation with an important delay due to reverse engineering process.

3.3.2 Integration status

During one month, we had an issue when we copied the modules from CVS1 to CVS2. This issue is solved.
Due to the lack of documentation, the current modules deliveries are hard to identify (see paragraph 3.2.3)
5 problem reports have been provided from WP6 :

- 2 are close
- 3 are still open

3.3.3 Solutions for continuation

The Actions list suggested in section 3.2.4 shall improve communication between WP5 & WP6, the technical quality of the production and the reactivity and efficiency of the integration process.
The new delivery of software modules has to be installed on CVS2 on the 21st July 2003 if they are compliance with the procedure of integration

3.4 Demonstration

The last technical board asked to WP7 to update the D7.1 "Demonstration Report" Draft in order to :

- correct some formulations in the document about WP7 members commitment,
- add tests descriptions in this document (to do this, Certinomis need at least one test description from each WP7 member),
- precise minor points and answer to questions in the first version and edit a new version of the draft document.

The WP7 leader want to stress the fact that two important members of WP7, important in terms of interest and in terms of men months budget, where not at the meeting in Paris (Finsiel and INPS). WP7 need a strong commitment from all its members. Finsiel and INPS do have an important role in the Italian side demonstration led by Intesa. It's necessary to know, as soon as possible, what Finsiel and INPS plan to do in the WP7, and to be more precise what are the test-beds they foresee to set-up for the demonstration.

WP7 also have a pending question (to WP5 or WP6) about the technical description of the platform needed for the demonstration. The major points are:

- do we strongly need more than one server (if more than one is needed for one platform, it will not be possible to have different platforms for different usages - members demonstration, open Internet demonstration...) ?

- which kind of processor do we need (PIII, Xeon, PIV/1GHz, 2GHz 3GHz...) ?
- how much memory do we need ?
- do we need high-speed disks ?

WP7 members in charge of platform set-up (Intesa, CertiNomis) need the description at least 6 weeks (computers delivery period) before the WP7 Kick-off.

At last in the new WP7 schedule, if accepted by the review on July 22nd, the kick-off is on November 3rd. That is to say that before November WP7 have to establish exactly what will be the tests and to get the endorsement of the technical and steering board.

4 Conclusions

This second period of the EuPKI project was very difficult because the Technical Board puts in evidence some important issues :

- legal aspects about the name of the software and the header of the modules : this issue is definitively solved,
- about schedule : the only solution is to postpone to 4 month the end of this project (March 2004) because there is a lack of open source PKI modules which are available. The end of the development is planned on November 2003.

The main issue is the delivery of the software module and the quality of them (for the first part of the delivery of the software module, WP5 was one month and half late; this is not acceptable for the future deliveries). Now, the activity of integration can just begin and only, after this summer, the technical board could have a good view about the delivery time and the quality of the software modules.

The actors of that project are particularly involved and motivated. Their different profiles and skills are a considerable asset to take advantage of their complementarily. One very important tool for the project continuation will be for sure the efficiency of the collaborative work, so that, hand-in-hand, each member can bring his expertise to finally deliver one major security solution in Europe. For these reasons, the Technical Board is still optimistic and approves the proposal of the new schedule.