PROJECT PERIODIC REPORT

Grant Agreement number: IST-248410

Project acronym: TERESA

Project title: Trusted Computing Engineering for Resource Constrained Embedded Systems Applications

Funding Scheme:

Date of latest version of Annex I against which the assessment will be made:

Periodic report: 1st ☑   2nd ☐   3rd ☐   4th ☐

Period covered: from   1 November 2010 to 30 October 2010

Name, title and organisation of the scientific representative of the project's coordinator[1]: Antonio Kung, TRIALOG SA

Tel: +33 1 44 70 61 00

Fax: +33 1 44 70 05 91

E-mail: antonio.kung@trialog.com

Project website[2] address: http://www.teresa-project.org/

Declaration by the scientific representative of the project coordinator

I, as scientific representative of the coordinator of this project and in line with the obligations as stated in Article II.2.3 of the Grant Agreement declare that:

- The attached periodic report represents an accurate description of the work carried out in this project for this reporting period;

- The project (tick as appropriate) [3]:

  ☐ has fully achieved its objectives and technical goals for the period;

  ☐ has achieved most of its objectives and technical goals for the period with relatively minor deviations.

  ☐ has failed to achieve critical objectives and/or is not at all on schedule.

- The public website, if applicable

  ☐ is up to date

  ☐ is not up to date

- To my best knowledge, the financial statements which are being submitted as part of this report are in line with the actual work carried out and are consistent with the report on the resources used for the project (section 3.4) and if applicable with the certificate on financial statement.

- All beneficiaries, in particular non-profit public bodies, secondary and higher education establishments, research organisations and SMEs, have declared to have verified their legal status. Any changes have been reported under section 3.2.3 (Project Management) in accordance with Article II.3.f of the Grant Agreement.

Name of scientific representative of the Coordinator: ....

Date: ..../ ..../ ....

For most of the projects, the signature of this declaration could be done directly via the IT reporting tool through an adapted IT mechanism

---

[3] If either of these boxes below is ticked, the report should reflect these and any remedial actions taken.

Trusted Computing Engineering for Resource Constrained Embedded Systems Applications

Deliverable D1.1

Year 1 Management Report

Table of Contents

1   Publishable Summary

1.1   Description of Project Context and Objectives

1.1.1   Context

Resource Constrained Embedded systems (RCES) are today integrated in increasingly more sophisticated applications. They require more security and dependability, they require more trust. This complexity is due to integration and functional considerations. First RCES are integrated into systems involving complex supply chains with many different business stakeholders focusing on different subsystems (e.g. processors, ASIC, operating system, middleware, application component) and different integration levels. Secondly, RCES are often used in multipurpose applications involving multiple possibly independent applications. We are switching from simpler value chains/ecosystems to fairly complex ones, where it is needed to define specific measures to protect individual computing assets.

Resource Constrained Embedded systems (RCES) are characterised as follows:

- We can find them everywhere, in different application sectors (automotive, aerospace, home, etc.), in different form factors (standalone systems, peripheral subsystems to main computing system, etc.), in many different devices (sensor, automotive electronic control unit, intelligent switches, home appliances e.g. washing machine drum control, meters, ...)

- Computing resources e.g. memory, tasks, buffers are statically determined. For instance the entities managed by the underlying operating systems are typically predetermined. For instance the OSEK-VDX RTOS (www.osek-vdx.org) standard defines tasks, resources, alarms entities. These entities are identified statically at design time (e.g. 3 tasks, 4 resources, 2 alarms would make up a given system). The figure below shows the process used in the automotive industry as recommended in the Autosar initiative (www.autosar.org) to generate the software elements of an electronic control unit (ECU). It includes a configuration phase and a generation phase. Other application sectors will also use similar configuration and build approaches. They could be often simpler, sometimes involving a manual process.

- Most RCES are high integrity systems, or systems which must meet assurance requirements. Depending on application requirements, different levels of assurance can be involved from the most stringent involving certification (e.g. DO178, IEC-61508 for safety-relevant embedded systems development), to lighter levels of assurance (e.g. industry practices). As a matter of fact, many RCES involve very significant software development cost and therefore use advanced engineering disciplines (automatic code generation, model-driven developments).

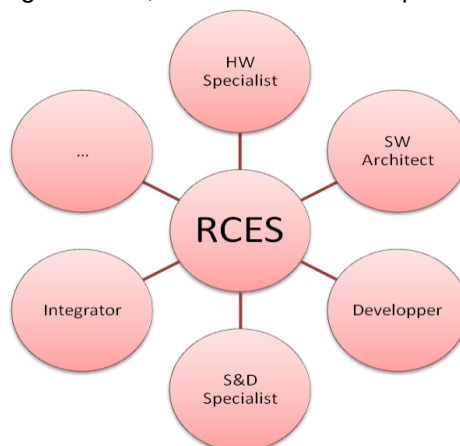**Figure 1 : RCES as a synergy of business**

1.1.2   Objectives

The goal of TERESA is to define, demonstrate and validate an engineering discipline for trust that is adapted to resource constrained embedded systems. We define trust as the degree with which security and dependability requirements are met.

- The TERESA approach is to use a model-based repository of Security and Dependability (S&D) patterns:

- Application sector trust models are defined as profiles (e.g. UML, SysML profiles), based on a common trust meta-model
- Security and dependability platform independent patterns are identified and defined for each application sectors (some patterns could be used by several application sectors)
- Formal properties on security and dependability are defined and validated for patterns belonging to application sectors requiring that level of assurance
- Platform dependent implementation of the patterns are of the patterns are guided with very precise requirements

TERESA has the following objectives:

- Provide guidelines for the specification of sector specific RCES trusted computing engineering. Software process engineers in a given sector can then use the guidelines to define a trusted computing engineering process that is integrated with the software engineering process used in their RCES sector.
- Define a trusted computing engineering approach that is suited to the following sectors: Automotive, Home control, Industry control and Metering sectors

1.2 Results So Far

1.2.1 Use Case Application Viewpoint, Collection, Challenges and Common Understanding

At the beginning of the project, a set of application use cases has been collected. This will serves as input for future tasks in other work packages as well as a manner to reach a common understanding between partners. A high level template of patterns has been defined according to the state of the art as well as use case application template based on V-Modell XT of the German government as a reference to unify criteria. The use cases collected include information on use of pattern, actors, roles and tasks involved in the domain specific engineering process.

The various templates try to also fit some requirements of formal validation by providing information on the pre-condition, knowledge of agents involved in the use case.

By the same time, an advanced study has been made about the state-of-the-art in three issues that were identified within the context of TERESA as being of a long term interest from a scientific perspective as well as for Security and Dependability (S&D) engineering of embedded systems. The first one is the enforcement of S&D in RCES by model-driven engineering; the second is the usefulness of existing approaches for the integration and composition of systems (e.g. cryptographic protocols) of S&D patterns in the context of security engineering for RCES; the last one is the investigation of S&D related requirements of the metering sector which are candidates to be formalized. An examination of the conformity assessment procedures which could be applied to new metering devices developed using a trusted design process as also be carried. As a result a Roadmap has been presented for these challenges.

1.2.2 Requirements and the TERESA Vision

As a real security engineering process does not exist, the partners have to come up with requirements against several subjects that are totally integrated in the TERESA vision.

S&D requirements are usually fulfilled with a limited set of solutions. The use of patterns can ease the integration of one of these solutions due to reusability, but this has an impact in the engineering process, that have to be completely redesigned to support efficiently the new paradigm.
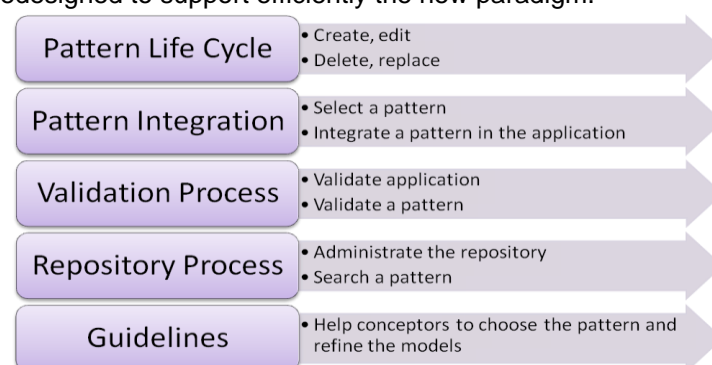
Figure 2 : Various processes in a pattern-based application development

Pattern-based application development needs several kinds of processes. In TERESA we mainly focus the work around several processes:

- The Pattern Life Cycle process corresponds to all the tasks related to the pattern development (create, update, delete, etc). At the end, the pattern is stored in a repository.
- The goal of **Pattern Integration process** consists to plug in a pattern in an application. For this, in function of S&D properties, the security engineer can require all patterns stored in the repository which meet his needs. Then, thanks to a model transformation, the pattern is integrated in the application model.
- The **Validation process** is transversal and interacts with the pattern life cycle and pattern integration processes. At each step of these processes, it is possible to validate a pattern or an application from an S&D point of view.
- The **Repository process** manages the pattern repository and provides a pattern search mechanism.
- At last, **Guidelines** are needed in order to help designers during the pattern life cycle and pattern integration processes.

The TERESA vision will consist in developing application by pattern construction. The TERESA vision is based on two main streams centralised around a repository. The repository provides S&D patterns which can be use during the application development. In order to design patterns, some guidelines help the security specialists. At the end of the pattern development, formal validation guarantees that the pattern achieved S&D properties
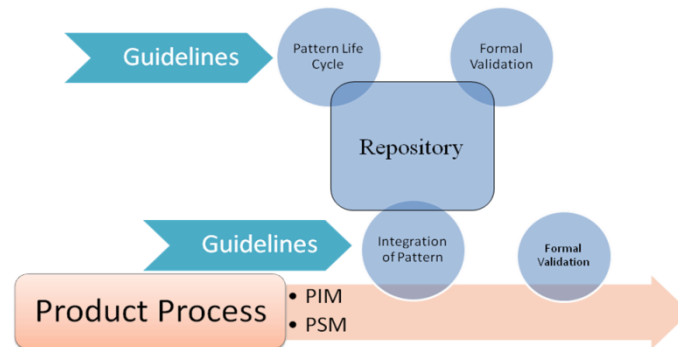
Figure 3 : The TERESA Vision

From that, and based on Fault Propagation Model, a Trust Model and a S&D Properties Model, the partners come up with a list of requirements from the engineer viewpoint, the engineering process viewpoint concerning each process, the repository, the pattern and artefact definition and the structure of a pattern including validation and verification issues.

1.3 Expected Results

Category	Today	Planned Innovation
Engineering separation of concern	Growing complexity of applications makes the integration of security and dependability an issue, as not all RCES application designers have the overall expertise.	TERESA will define an engineering approach based on a repository of models and patterns. It ensures separation of engineering roles between (1) application experts, (2) S&D experts and (3) MDE experts
	There are RCES cases where S&D expertise is not available. This prevent application engineers to integrate S&D solutions	As the repository can be populated independently by a community of security experts and MDE experts, application engineers will be provided with ready to use S&D designs, possibly at different levels (e.g. platform independent level, platform dependent level)
	There are RCES cases where MDE expertise is not available. This prevent application engineers to take advantage of the benefits of MDE	Access to repository will be supported by tools providing application level viewpoints of the repository elements (models, patterns). In other word, the access tool will not require modeling specification expertise. These tools can provide documenting capability (i.e. the involved model is documented, or the integrated S&D pattern documented) as well as administration capability (i.e. the application designer may wish to enrich/modify a model).

Category	Today	Planned Innovation
Supporting domain specific processes	Engineering approaches based on variety of static allocation of computing resources	TERESA will define a common engineering process meta model from which domain specific engineering process models can be defined (e.g. the automotive engineering process model). This will allow when possible the reuse of common parts in processes.
	There is a wide variety of high integrity systems with assurance requirements, including formal validation requirements	Domain specific engineering process models may include different assurance capability. When formal validation is required in the process, patterns involved will be formally validated, and automated guidelines will be provided to assure the consistent transformation to platform dependent implementations.
	Wide variety of implementation cases (reuse an implementation without change, optimizing an existing implementation for resource constraint reasons, implementing for a new platform)	Different levels of engineering process allowed, including one where the S&D patterns are just considered as documented specification to be used by engineers to carry out a manual implementation.
Research	Model driven engineering is still not well established in particular for RCES applications	Study specific challenges that may help improve gaps at the level of MDE for RCES trusted computing engineering
	Integration of S&D patterns is not well supported	Study specific challenges raised by the combination of two patterns.
	Formal validation of metrology requirements is needed	Study methods for the validation of metering software regarding type approval.

1.4 For More Information

Contact the project coordinator or its deputy :

Project Coordinator :	Deputy Coordinator :
Antonio Kung, TRIALOG SA 25 rue du Général Foy, 75008 Paris, France +33 (0) 1 44 70 61 00 antonio.kung@trialog.com	Cyril Grepet, TRIALOG SA 25 rue du Général Foy, 75008 Paris, France +33 (0) 1 44 70 61 00 cyril.grepet@trialog.com

You can also following us on www.teresa-project.com

2 Core of the Report for the Period

- **Project objectives**

- **Work Progress and Achievements**

- **Project Management**

2.1 Project Objectives for the Period

The objectives of the first year were to define the foundation of the TERESA project. They can be overviewed by a sort in two categories: Requirement and Identification of Challenges. It mainly corresponds to the Milestone M1 described in section 4.1

Along the first year, the partners aimed to:

- Reach and define a common understanding
- Define a list of use cases from each domain highlighting domain specificity, specific engineering process, use of patterns in a S&D perspective.
- Define requirements for
- the application viewpoint,
- the engineering process
- the repository
- Define a formal validation approach and the requirement against the information needed in the patterns

2.2 Objectives

- Objective G: Provide guidelines for the specification of sector specific RCES trusted computing engineering. Software process engineers in a given sector use the guideline to define a trusted computing engineering process that is integrated to the software engineering process used in the RCES sector
- Statement : understanding
- Objective S: Define a trusted computing engineering approach that is suited to a number of sectors: the automotive sector, the home control sector, the industry control sector, the metering sector
- Statement : understanding

2.3 Activity

Activity	Description	Type of Activity	Verification in Project	Progress towards achieving objectives
A1	Model-driven RCES trust engineering approach	Engineering process	D3.2, D3.3, D3.4	Requirements and main concepts have been defined
A2	Integration into RCES engineering approaches		D6.4	N/A
A3	Trust meta-models and models	Repository for RCES trust engineering	D3.2, D3.3, D4.3, D4.4	State of the Art studied. Requirements and main concepts have been defined
A4	S&D patterns		D4.3, D4.4	State of the Art studied. Requirements and main concepts have been defined
A5	Platform dependent implementations of S&D patterns		D4.3, D4.4	State of the Art studied. Requirements and main concepts have been defined
A6	Formal Validation of S&D patterns	Formal validation of RCES trust	D5.2, D5.3	Requirements on the patterns description and the approach have been defined

Activity	Description	Type of Activity	Verification in Project	Progress towards achieving objectives
A7	Derived guidelines for platform dependent implementation of the patterns	engineering	D5.4, D5.5	N/A
A8	S&D Engineering process for RCES in Automotive systems	Specialisation to specific RCES sectors	D5.3, D5.5	Understanding of specificity of the domain
A9	S&D Engineering process for RCES in Industry control systems		D5.3, D5.5	Understanding of specificity of the domain
A10	S&D Engineering process for RCES in Home control systems		D5.3, D5.5	Understanding of specificity of the domain
A11	S&D Engineering process for RCES in Metering systems		D5.3, D5.5	Understanding of specificity of the domain
A12	Advance on MDE for RCES	Challenges for RCES engineering	D7.1, D7.2, D7.3	State of the art studied and challenges identified
A13	Advance on integration of S&D patterns		D7.1, D7.2, D7.3	State of the art studied and challenges identified
A14	Advance on formal validation of metrology requirements		D7.1, D7.2, D7.3	State of the art studied and challenges identified

3 Work Progress and Achievements during the Period

This section is structured into quarters. Each quarter is presented with 6 subsections:

- Overall project achievement per work package during the quarter
- Overview of advance per task during the quarter
- Dissemination and promotion work during the quarter
- Overview of work per partner during the quarter
- Project resources during the quarter
- Project management during the quarter

3.1 Initial Resource Figures

The description PM allocation to work package is in the table below.

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	10	3	15	24	0	16	0	8	76
UTM-IRIT	1	3	14	24	3	8	9	7	69
SIT	1	2	5	0	20	0	11	2	41
escrypt	1	3	8	8	0	16	0	5	41
Usiegen	1	9	12	12	4	12	15	7	72
Ikerlan-K4	1	16	13	2	0	16	7	2	57
Totals	15	36	67	70	27	68	42	31	356

This table has been converted into hours in the table below

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	1700	510	2550	4080	0	2720	0	1360	12920
UTM-IRIT	151	453	2114	3624	453	1208	1359	1057	10419
SIT	140	280	700	0	2800	0	1540	280	5740
escrypt	174	522	1392	1392	0	2784	0	870	7134
Usiegen	140	1260	1680	1680	560	1680	2100	980	10080
Ikerlan-K4	150	2400	1950	300	0	2400	1050	300	8550
Totals	2455	5425	10386	11076	3813	10792	6049	4847	54843

The estimated resources per quarter have been calculated with the coefficients in the table below.

Quarter	WP1	WP2	WP3	WP4	WP5	WP6	WP7	WP8
Q1	8,33%	40,00%					8,33%	8,33%
Q2	8,33%	40,00%	11,11%	11,11%	9,09%		8,33%	8,33%
Q3	8,33%	10,00%	11,11%	11,11%	9,09%		8,33%	8,33%
Q4	8,33%	10,00%	11,11%	11,11%	9,09%		8,33%	8,33%
Q5	8,33%		11,11%	11,11%	9,09%	12,50%	8,33%	8,33%
Q6	8,33%		11,11%	11,11%	9,09%	12,50%	8,33%	8,33%
Q7	8,33%		11,11%	11,11%	9,09%	12,50%	8,33%	8,33%
Q8	8,33%		11,11%	11,11%	9,09%	12,50%	8,33%	8,33%
Q9	8,33%		11,11%	11,11%	9,09%	12,50%	8,33%	8,33%
Q10	8,33%		11,11%	11,11%	9,09%	12,50%	8,33%	8,33%
Q11	8,33%				9,09%	12,50%	8,33%	8,33%
Q12	8,33%				9,09%	12,50%	8,33%	8,33%
Checksum	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%

3.2 First Quarter (November and December 2009, January 2010)

3.2.1 Main Achievements

WP2 Use cases and requirements

- State of the art on Pattern and Repository
- Definition of a Common Understanding.
- Coordination on working approach for use case
- First specific domain use cases

WP5 Formal Validation

- Proposition of possible formal validation approaches
- Definition of Security and Dependability terms for a common understanding

WP7 Challenge for RCES trust

- First state of the art on Model based engineering, repositories and Patterns
- First approach to integrate verification on models representing Patterns
- TOC of deliverable D7.1: Analysis of challenges (State of the Art)
- Identification of security requirements that will be target of validation
- Identification of categories for the integration of patterns ("sequencing", "stacking", "close integration")
- Identification of perceptive layers involved within TERESA process

WP8 Link to the Industry and Reach Out

- Participation in the meeting of ISO/IEC JTC 1 SC 27 ("Security Techniques") in Redmond/USA from Nov. 1 - 7, 2009 .
- Contacting the Physikalisch-Technische Bundesanstalt PTB (National Metrology Institute of Germany
- Contact to Serenity's Security Engineering WG for participation in Security Engineering Manifesto
- Website release in January

3.2.2 Overview of the Work Performed by Task

Year 1 Workpackages and Tasks	Date	Estimed % of achievement
WP2 Use Cases and Requirements	M1- M12	
T1 Use Cases and Common Understanding	M1 - M6	50%
T2 Requirements	M4 - M12	Not Started
WP3 Definition of Engineering Process	M4 - M30	
T1 Requirements	M4 - M12	Not Started
WP4 Repository	M4 - M30	
T1 Repository structure	M4 - M30	
T1.1 Requirements	M4 - M12	Not Started
T2 Models	M4 - M30	
T2.1 Requirements	M4 - M12	Not Started
T3 Patterns	M4 - M30	
T3.1 Requirements	M4 - M12	Not Started
WP5 Formal Validation	M4 - M36	
T1 Specification of formal validation approach	M4 - M12	Not Started
WP7 Challenges for RCES Trust	M1 - M36	
T1 Model Driven Trust Engineering for RCES	M1 - M36	
T1.1 State of the art	M1 - M6	50%
T1.2 Research 1	M7 - M24	Not Started
T2 Integration of S&D patterns	M1 - M36	
T2.1 State of the art	M1 - M6	50%
T2.2 Research 1	M7 - M24	Not Started
T3 Formal Validation of Metrology Requirements	M1 - M36	
T3.1 State of the art	M1 - M6	50%
T3.2 Research 1	M7 - M24	Not Started

3.2.3 Dissemination and Promotional Information

Date	Title	Number of persons attended + other information
Nov. 1 - 7, 2009	meeting of ISO/IEC JTC 1 SC 27 ("Security Techniques") in Redmond/USA	SC 27 standardizes cryptographic algorithms, modes, methods and protocols. Recent proposals cover also lightweight cryptography, which will become important for resource constrained systems like embedded systems in metering devices. Mr. Ruland acts as project editor for the upcoming standard ISO 11770-5 Key Management: Group Key Management.

3.2.4 Overview or the Work Performed per Partner

The table below briefly describes the work performed by each partner during the quarter.

Activity partner	Description of work performed during the quarter
Trialog	(WP1.1) Organisation of Kick-Off
Trialog	(WP1.1) Organisation of Agenda for all the Meeting and Conference call
Trialog	(WP1.1) Lead each Meeting and conf call
Trialog	(WP1.1) Organisation of 2 conf call
Trialog	(WP2.1) Provided a State of the Art on security pattern, pattern template and their classification (Common understanding).
Trialog	(WP2.1) Provided an example of a pattern for the project (Secure Service Discovery) allowing other partners to reach a better understanding, and used as a reference in the project and templates for TERESA patterns.
Trialog	(WP2.1) First Home Control Domain identification of use cases and requirements according to D2.1 "Use Case Application Viewpoint"
Trialog	(WP8.1) Web site released
UTM-IRIT	(WP1.1 and WP4) State of the art on Model based engineering and repositories in 1st Meeting
UTM-IRIT	(WP1.1) State of the art on Patterns in 2nd Meeting
UTM-IRIT	(WP7.1) First step to how we can integrate verification on models representing Patterns
UTM-IRIT	(WP7) Propose the TOC for deliverable D7.1: : Analysis of challenges (State of the Art)
SIT	Organisation of Meeting in Darmstadt
SIT	(WP8.1) Contact to Serenity's Security Engineering WG for participation in Security Engineering Manifesto
SIT	(WP2.1) Glossary of Terms leading to a Common Understanding
SIT	(WP2.1) Identification of security requirements that will be target of validation
SIT	(WP7.2) Identification of categories for the integration of patterns ("sequencing", "stacking", "close integration")
SIT	(WP7.2) Identification of perceptive layers involved within TERESA process
escrypt	(WP8.1) escrypt suggested several Logo proposals
escrypt	(WP8.1) escrypt wrote a newsletter text and a press release that will be published in March
escrypt	(WP2.1) escrypt collected and described use cases for the automotive domain
escrypt	(WP2.1) escrypt started describing the patterns "Secure Communication" and "Remote Attestation" at a high level which will be refined during the project
escrypt	(WP2.1) escrypt started showing the engineering process incorporating dependability by example
escrypt	As a specialist for automotive security, escrypt started to describe domain-specific characteristics (i.e., constraints and advantages) for the automotive sector
escrypt	(WP2.1) Support in finding a common understanding (terms, characteristics, use cases
Siegen	(WP8.T1) Mr. Christoph Ruland participated in the meeting of ISO/IEC JTC 1 SC 27 ("Security Techniques") in Redmond/USA from Nov. 1 - 7, 2009 . SC 27 standardizes cryptographic algorithms, modes, methods and protocols. Mr. Ruland acts as project editor for the upcoming standard ISO 11770-5 Key Management: Group Key Management.

Siegen	(WP7.3) Study of standardization documents relevant for the metering domain
Siegen	(WP2.1) Common understanding for use cases
Siegen	(WP2.1) Collection of input for use cases (diagrams, roles and actors)
Siegen	Preparation for technical meeting (Documents, presentation)
Siegen	Technical meeting in Darmstadt
Siegen	(WP8.1) Contacting the Physikalisch-Technische Bundesanstalt PTB (National Metrology Institute of Germany)
Ikerlan-IK4	(WP2.1) Definition of the use cases collection process.
Ikerlan-IK4	(WP2.1) The identification and collection of uses cases that highlight the different engineering roles that are involved in the development of an RCES from the industrial control domain.
Ikerlan-IK4	(WP2.1) The identification and the creation of a common understanding within the consortium.
Ikerlan-IK4	(WP2.1) Coordinating the first version of for D2.1 deliverable "Use cases application viewpoint" with the contribution of all the Partners.
Ikerlan-IK4	(WP2.1) Coordinating the first version of for the internal document "Common understanding" with the contribution of all the Partners

3.2.5 Project Effort

3.2.5.1 Budget (person-hours) Consumed in Reporting Period (quarter)

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	172	502						58	732
UTM-IRIT		53					152	18	223
SIT		210					330		540
escrypt	24	132						75	231
Usiegen	15	420					296	109	840
Ikerlan-K4	13	960					88	25	1086
Totals	224	2277	0	0	0	0	866	285	3652

3.2.5.2 (Estimated) Budget Available in Reporting Period

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	142	204	0	0	0	0	0	113	459
UTM-IRIT	13	181	0	0	0	0	113	88	395
SIT	12	112	0	0	0	0	128	23	275
escrypt	15	209	0	0	0	0	0	73	296
Usiegen	12	504	0	0	0	0	175	82	772
Ikerlan-K4	13	960	0	0	0	0	88	25	1085
Totals	205	2170	0	0	0	0	504	404	3283

3.2.5.3 (Estimated) Percentage of Budget Used with respect to Reporting Period

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	121%	246%	-	-	-	-	-	51%	159%
UTM-IRIT	0%	29%	-	-	-	-	134%	20%	56%
SIT	0%	188%	-	-	-	-	257%	0%	196%
escrypt	166%	63%	-	-	-	-	-	103%	78%
Usiegen	129%	83%	-	-	-	-	169%	133%	109%
Ikerlan-K4	104%	100%	-	-	-	-	101%	100%	100%
Totals	109%	105%	-	-	-	-	172%	71%	111%

3.2.5.4 Remaining Budget

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	1528	8	2550	4080	0	2720	0	1302	12188
UTM-IRIT	151	400	2114	3624	453	1208	1207	1039	10196
SIT	140	70	700	0	2800	0	1210	280	5200
escrypt	150	390	1392	1392	0	2784	0	795	6903
Usiegen	125	840	1680	1680	560	1680	1804	871	9240
Ikerlan-K4	137	1440	1950	300	0	2400	962	275	7464
Totals	2231	3148	10386	11076	3813	10792	5183	4562	51191

3.2.5.5 Budget Consumed to Date

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	172	502	0	0	0	0	0	58	732
UTM-IRIT	0	53	0	0	0	0	152	18	223
SIT	0	210	0	0	0	0	330	0	540
escrypt	24	132	0	0	0	0	0	75	231
Usiegen	15	420	0	0	0	0	296	109	840
Ikerlan-K4	13	960	0	0	0	0	88	25	1086
Totals	224	2277	0	0	0	0	866	285	3652

3.2.5.6 (Estimated) Budget Available to Date

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	142	204	0	0	0	0	0	113	459
UTM-IRIT	13	181	0	0	0	0	113	88	395
SIT	12	112	0	0	0	0	128	23	275
escrypt	12	504	0	0	0	0	175	82	772
Usiegen	12	504	0	0	0	0	175	82	772
Ikerlan-K4	13	960	0	0	0	0	88	25	1085
Totals	202	2465	0	0	0	0	679	413	3759

3.2.5.7 (Estimated) Percentage of Budget Used

Percentage of budget used

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	121%	246%	-	-	-	-	-	51%	159%
UTM-IRIT	0%	29%	-	-	-	-	134%	20%	56%
SIT	0%	188%	-	-	-	-	257%	0%	196%
escrypt	206%	26%	-	-	-	-	0%	92%	
Usiegen	206%	26%	-	-	-	-	0%	92%	30%
Ikerlan-K4	104%	100%	-	-	-	-	101%	100%	100%
Totals	111%	92%	-	-	-	-	128%	69%	97%

3.2.5.8 Budget Analysis

TERESA Budget Analysis

Company	Trialog	UTM-IRIT	SIT	escrypt	Usiegen	Ikerlan-K4	Totals
Used	732	223	540	231	840	1086	3367
Remaining	12188	10196	5200	6903	9240	7464	51476
Budget	12920	10419	5740	7134	10080	8550	54843
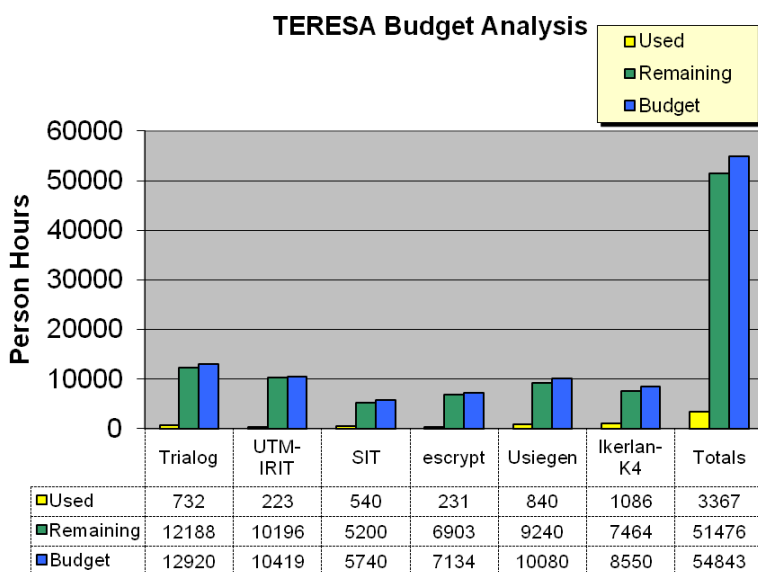
3.2.6 Project Management during the Period

3.2.6.1 Main Achievements

WP1. Project Management

- Organisation of meetings and conference calls
- Administration (web site, workspace, financial aspects)
- Preparation of handbook
- Project Presentation D1.4 has been prepared

3.2.6.2 Problems Encountered

Reach a common understanding of the pattern and define use cases in different sectors problem and how to collect use cases in a homogeneous way.

3.2.6.3 Deviations from Plan

- None

3.2.6.4 Project Meetings

Title	Date and Place	Main Conclusions
Conference call kick-off	09 November 2009	Preparation of the kick-off
Kick off	Paris, 16 November 2009	Discussion to reach a common understanding
Conference call	17 December 2009	Discussion about patterns in each domain and how to describe them
Plenary Meeting	Darmstadt	Common understanding about patterns, categorization, verification of patterns and templates.
Specific meeting for WP2	Paris	Discussion about WP2

3.3 Second Quarter (February, March and April 2010)

3.3.1 Main Achievements

WP2 Use cases and requirements

- Definition of Use Cases collection process highlighting the different roles
- Definition of first requirements for the project
- First requirements on use cases to allow on to validate S&D properties
- Definition of measure of success

WP3 Definition of Engineering process

- Introduction of four TERESA specific processes that highlight the separation of concerns between WPs

WP4 Repository

- First discussion on repository structure and requirements

WP5 Formal Validation

- Work on the description and model representation of Patterns for Formal Analysis
- Work on the description and model representation of Patterns for Repository Storage

WP7 Challenge for RCES trust

- Preparation of Deliverable D7.1 – regarding State of the Art and Scientific Challenges for Pattern Integration

WP8 Link to the industry and reach out

- Factsheet
- Final version of Logo
- Final template for documents

3.3.2 Overview of the Work Performed by Task

Year 1 Workpackages and Tasks	Date	Estimed % of achievement
WP2 Use Cases and Requirements	M1- M12	
T1 Use Cases and Common Understanding	M1 - M6	99%
T2 Requirements	M4 - M12	33%
WP3 Definition of Engineering Process	M4 - M30	
T1 Requirements	M4 - M12	33%
WP4 Repository	M4 - M30	
T1 Repository structure	M4 - M30	
T1.1 Requirements	M4 - M12	33%
T2 Models	M4 - M30	
T2.1 Requirements	M4 - M12	33%
T3 Patterns	M4 - M30	
T3.1 Requirements	M4 - M12	33%
WP5 Formal Validation	M4 - M36	
T1 Specification of formal validation approach	M4 - M12	33%
WP7 Challenges for RCES Trust	M1 - M36	
T1 Model Driven Trust Engineering for RCES	M1 - M36	
T1.1 State of the art	M1 - M6	99%
T1.2 Research 1	M7 - M24	Not Started
T2 Integration of S&D patterns	M1 - M36	
T2.1 State of the art	M1 - M6	99%
T2.2 Research 1	M7 - M24	Not Started
T3 Formal Validation of Metrology Requirements	M1 - M36	
T3.1 State of the art	M1 - M6	99%
T3.2 Research 1	M7 - M24	Not Started

3.3.3 Dissemination and Promotional Information

Date	Title	Number of persons attended + other information
10.02.10	eWorld in Essen (Smart Metering Fare)	Escrypt: Visiting of eWorld in Essen and discussion of TERESA approach with different companies from the metering industry
02-04.03.10	embedded world conference in Nurnberg	Escrypt: Distribution of the TERESA factsheet
26.02.10	Visit of a PayTV solution provider	Escrypt: Discussion of potential applications of security patterns
29.03.10	Visit of a Bank terminal solution provider	Escrypt: Discussion of potential applications of security patterns
04.03.10	NRW-IKT meeting ZENIT – Successful R&D in Europe in Düsseldorf	Escrypt: Search for new partners interested in the TERESA engineering approach
	Meeting with the Physikalisch-Technische Bundesanstalt	Discussion about the idea of a validated engineering process to simplify the type approval procedure
20-23.05.2010	Preparation of a paper for the 3-rd International Conference "Telecommunications, Electronics and Informatics" ICTEI in CHISINAU	Usiegen
February-April	Preparation of the IEEE international DANCE workshop (http://www.irit.fr/DANCE2010) Discussion to join the to join the IFIP Working Group 10.2 on Embedded Systems	IRIT

3.3.4 Overview of the Work Performed per Partner

The table below briefly describes the work performed by each partner during the quarter.

Activity partner	Description of work performed during the quarter
Trialog	(WP1.1) Organisation of Kick-Off
Trialog	(WP1.1) Organisation of Agenda for all the Meeting and Conference call
Trialog	(WP1.1) Lead each Meeting and Conference call
Trialog	(WP1.1) Organisation of 2 Conference call
Trialog	(WP2.1) Presentation of Home Control Domain (HCD) for D2.1
Trialog	(WP2.1) Description of HCD use cases according to D2.1 template
Trialog	(WP2.1) Study on SIT formal verification approach on Secure Service Discovery use case.
Trialog	(WP2.2 & WP3.1) First definition of separation of concerns between WP2.2 and WP3.1 viewpoints
Trialog	(WP8.1) Logo
Trialog	(WP8.1) Final template for mandatory document (office version)
Trialog	(WP8.1) Factsheet

UTM-IRIT	(WP4.1, WP4.2, WP7.1) Participation at TERESA meeting Siegen (Germany) (25-26 march 2010): • Talk about Model based engineering and repositories (WP4.1 & 2) • Lead a discussion on repository structure and requirements (WP4.1) • Talk about Model Driven Trust Engineering for RCES (WP7.1)
UTM-IRIT	(WP4.1 and WP2.2) Proposition of the set of artefacts to populate the repository (WP4.1) with regard to the patterns life cycle and repository structure requirements (WP2.2)
UTM-IRIT	(WP7) Coordination of the deliverable D.17 about Analysis of Challenges
UTM-IRIT	(WP3.2) Starting to work on Common engineering meta model
UTM-IRIT	(WP3.3) Starting to work on Guidelines for deriving models
UTM-IRIT	(WP8.1) Submission of Workshop about S&D patterns
UTM-IRIT	(WP8.1) Submission of paper to SEC-SY-2010 workshop (French Workshop)
SIT	(WP5.1) Identification of security requirements that will be target of validation
SIT	(WP2.2 & WP5.1 & WP7.2) Review of Deliverable D2.1 from viewpoint of WP5 & WP7
SIT	(WP7.2) Work on Deliverable D7.1 – regarding State of the Art and Scientific Challenges for Pattern Integration
SIT	(WP5.1) Work on the description and model representation of Patterns for Formal Analysis
SIT	(WP4.1) Work on the description and model representation of Patterns for Repository Storage
escrypt	(WP2.1) escrypt collected and described use cases for the automotive domain
escrypt	(WP2.1) escrypt described the patterns "Secure Communication" and "Remote Attestation"
escrypt	(WP2.1) As a specialist for automotive security, escrypt described domain-specific characteristics (i.e., constraints and advantages) for the automotive sector
escrypt	(WP2.1) Support in finding a common understanding (terms, characteristics, use cases)
escrypt	(WP2.1) escrypt described the engineering process incorporatingdependability
escrypt	(WP2.1) escrypt described the different engineering roles that are involved in the development of RCES in the automotive domain
Siegen	(WP2.1) Definition of use cases and according diagrams for WP2.1
Siegen	(WP7.3) Study of significant catalogues, guides and directives (WELMEC, OIML, PTB, MID)
Siegen	(WP2.1 W2.2)Collection of requirements relevant in the metering domain
Siegen	(WP7.3) Relevant laws in the metering sector
Siegen	(WP2.1, 2.2 and 7.3) State of the art in the metering domain
Siegen	(WP2.1 and 7.3) Process of type approval for metering devices
Siegen	(WP2.1) Issue input for deliverable D2.1
Siegen	Technical meeting in Siegen
Siegen	(WP7.3) Issue input for deliverable D7.1

Ikerlan-IK4	(WP2.2 and WP3.1) Definition of WP2 and WP3 requirements, they are similar and sometimes is not very clear the difference. A special effort has been done with Trialog to agree on this topic.
Ikerlan-IK4	(WP3.1) Definition of "Use cases process viewpoint" for WP3.
Ikerlan-IK4	(WP2.2) Definition of the use cases collection process.
Ikerlan-IK4	(WP2.2) The identification and collection of uses cases that highlight the different engineering roles that are involved in the development of an RCES from the industrial control domain.
Ikerlan-IK4	(WP2.1) The identification and the creation of a common understanding within the consortium
Ikerlan-IK4	(WP2.1) Coordinating the first version of for D2.1 deliverable "Use cases application viewpoint" with the contribution of all the Partners
Ikerlan-IK4	(WP2.1) Coordinating the first version of for the internal document "Common understanding" with the contribution of all the Partners.

3.3.5 Project Effort

3.3.5.1 Budget (person-hours) Consumed in Reporting Period (quarter)

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	168	160	280	272	0	0	0	120	1000
UTM-IRIT	0	70	0	198	0	0	228	41	537
SIT	0	70	0	0	254	0	109	0	433
escrypt	25	188	0	0	0	0	0	75	288
Usiegen	11	420	0	0	0	0	264	145	840
Ikerlan-K4	13	960	217	33	0	0	88	25	1336
Totals	217	1868	497	503	254	0	689	406	4434

3.3.5.2 (Estimated) Budget Available in Reporting Period

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	142	204	283	453	0	0	0	113	1196
UTM-IRIT	13	181	235	403	41	0	113	88	1074
SIT	12	112	78	0	255	0	128	23	608
escrypt	15	209	155	155	0	0	0	73	605
Usiegen	12	504	187	187	51	0	175	82	1197
Ikerlan-K4	13	960	217	33	0	0	88	25	1335
Totals	205	2170	1154	1231	347	0	504	404	6014

3.3.5.3 (Estimated) Percentage of Budget used with respect to Reporting Period

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	119%	78%	99%	60%	-	-	-	106%	84%
UTM-IRIT	0%	39%	0%	49%	0%	-	201%	47%	50%
SIT	0%	63%	0%	-	100%	-	85%	0%	71%
escrypt	172%	90%	0%	0%	-	-	-	103%	48%
Usiegen	94%	83%	0%	0%	0%	-	151%	178%	70%
Ikerlan-K4	104%	100%	100%	99%	-	-	101%	100%	100%
Totals	106%	86%	43%	41%	73%	-	137%	101%	74%

3.3.5.4 Remaining Budget

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	1360	-152	2270	3808	0	2720	0	1182	11188
UTM-IRIT	151	330	2114	3426	453	1208	979	998	9659
SIT	140	0	700	0	2546	0	1101	280	4767
escrypt	125	202	1392	1392	0	2784	0	720	6615
Usiegen	114	420	1680	1680	560	1680	1540	726	8400
Ikerlan-K4	124	480	1733	267	0	2400	874	250	6128
Totals	2014	1280	9889	10573	3559	10792	4494	4156	46757

3.3.5.5 Budget Consumed to Date

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	340	662	280	272	0	0	0	178	1732
UTM-IRIT	0	123	0	198	0	0	380	59	760
SIT	0	280	0	0	254	0	439	0	973
escrypt	49	320	0	0	0	0	0	150	519
Usiegen	26	840	0	0	0	0	560	254	1680
Ikerlan-K4	26	1920	217	33	0	0	176	50	2422
Totals	441	4145	497	503	254	0	1555	691	8086

3.3.5.6 (Estimated) Budget Available to Date

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	283	408	283	453	0	113	1196	113	2850
UTM-IRIT	24	293	78	0	255	23	721	88	1482
SIT	26	321	155	155	0	73	733	23	1486
escrypt	23	1008	187	187	51	82	1372	82	2990
Usiegen	23	1008	187	187	51	82	1372	82	2990
Ikerlan-K4	25	1920	217	33	0	25	1423	25	3668
Totals	405	4958	1106	1015	356	398	6816	413	15466

3.3.5.7 (Estimated) Percentage of Budget Used

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	120%	162%	99%	60%	-	0%	0%	157%	61%
UTM-IRIT	0%	42%	0%	u	0%	0%	53%	67%	51%
SIT	0%	87%	0%	0%	u	0%	60%	0%	65%
escrypt	210%	32%	0%	0%	0%	0%	0%	184%	
Usiegen	210%	32%	0%	0%	0%	0%	0%	184%	17%
Ikerlan-K4	104%	100%	100%	99%	-	0%	12%	200%	66%
Totals	109%	84%	45%	50%	71%	0%	23%	167%	52%

3.3.5.8 Budget Analysis

TERESA Budget Analysis

Company	Trialog	UTM-IRIT	SIT	escrypt	Usiegen	Ikerlan-K4	Totals
Used	1732	760	973	519	1680	2422	7395
Remaining	11188	9659	4767	6615	8400	6128	47448
Budget	12920	10419	5740	7134	10080	8550	54843
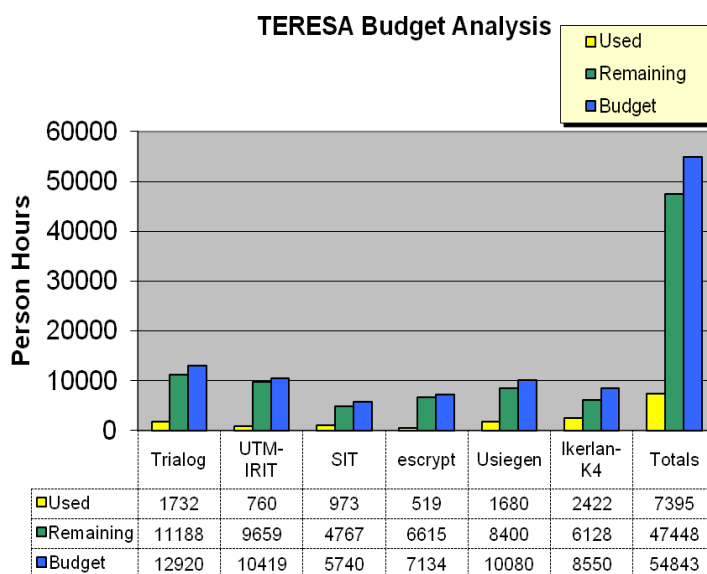
Company

3.3.6 Project Management during the Period

3.3.6.1 Main Achievements

WP1. Project Management

- Organisation of meetings and conference calls
- Administration (web site, workspace, financial aspects)
- Update of handbook

3.3.6.2 Problems Encountered

- The objective of this period was to identify the requirements on the trusted engineering process from the engineer viewpoint from different sectors and partners. The main difficulty has been to agree with all the partners in how to collect the use cases in a homogeneous way
- Separation of concerns between WP2 and WP3 requirements. Overlapping concerns betweens requirements for WP2, WP3 and WP4.

3.3.6.3 Deviations from Plan

Due to the late convergence of representation of Use Cases from each domain and requirements on these use cases to allow one to perform a formal validation, the submission of the deliverable D2.1 could be a little bit late (but within the 45 days tolerate by the commission)

This led us to delay the D7.1 submission to submit the entire documents at the same time

D1.4 has been delayed to reach a vision of the TERESA project. A first draft has been created.

3.3.6.4 Project Meetings

Title	Date and Place	Main Conclusions
Conference call	15 February 2010	Convergence of description of use case, patterns and involved actors in the engineering process of each domain
Conference call	09 March 2010	Presentation of partners works on their use case – analysis of the work still to achieve
Plenary Meeting	Siegen, 25 March 2010	Discussion about patterns in each domain and how to describe them – Preparation of the submission of the deliverable

Title	Date and Place	Main Conclusions
Conference call	Foreseen on the beginning of May	Topic : State of the submission of deliverables and Separation of concerns about requirements
Plenary Meeting	Mondragon, 07 June 2010	Agenda to define later

3.4 Third Quarter (May, June and July 2010)

3.4.1 Main Achievements

WP2 Use cases and requirements
- Submission of the deliverable 2.1
- First set of requirements from the use case viewpoint
- Collaboration between WP2, WP3 and WP4 about requirements

WP3 Definition of engineering process
- Refinement of the process
- First set of requirements from the engineering process viewpoint
- Collaboration between WP2, WP3 and WP4 about requirements

WP4 Repository
- First set of requirement for the repository structure, model and pattern life cycle
- Collaboration between WP2, WP3 and WP4 about requirements
- Definition of a first set of domain specific artefact for the repository

WP5 Formal Validation
- Work on formal Validation approach still on going
- Work on Identification of Dependability related use cases

WP6 Evaluation
- NA

WP7 Challenge for RCES trust
- Consolidation and submission of Deliverable D7.1
- Bilateral meeting between SIT and Usiegen in Darmstadt to discuss the use of SeMF for the formalization of lawful metrology requirements

WP8 Link to the industry and reach out
- Management of the first Workshop S&D4RCES : website and submissions
- Contact with Serenity Forum which has now a link to the TERESA website
- Preparation of a workshop in conjunction with ICSE 2011 (refused without reason).

3.4.2 Overview of the Work Performed by Task

Year 1 Workpackages and Tasks	Date	Estimed % of achievement
WP2 Use Cases and Requirements	M1- M12	
T1 Use Cases and Common Understanding	M1 - M6	Completed
T2 Requirements	M4 - M12	66%
WP3 Definition of Engineering Process	M4 - M30	
T1 Requirements	M4 - M12	66%
WP4 Repository	M4 - M30	
T1 Repository structure	M4 - M30	
T1.1 Requirements	M4 - M12	66%
T2 Models	M4 - M30	
T2.1 Requirements	M4 - M12	66%
T3 Patterns	M4 - M30	

T3.1 Requirements	M4 - M12	66%
WP5 Formal Validation	M4 - M36	
T1 Specification of formal validation approach	M4 - M12	66%
WP7 Challenges for RCES Trust	M1 - M36	
T1 Model Driven Trust Engineering for RCES	M1 - M36	
T1.1 State of the art	M1 - M6	Completed
T1.2 Research 1	M7 - M24	6%
T2 Integration of S&D patterns	M1 - M36	
T2.1 State of the art	M1 - M6	Completed
T2.2 Research 1	M7 - M24	6%
T3 Formal Validation of Metrology Requirements	M1 - M36	
T3.1 State of the art	M1 - M6	Completed
T3.2 Research 1	M7 - M24	6%

3.4.3 Dissemination and Promotional Information

Date	Title	Number of persons attended + other information
04.05.- 05.05.10	OVERSEE Meeting in Bochum	Escrypt and Trialog: Liaison activity with other FP7 projects
07.06.10	EVITA Meeting in Munich	Escrypt and Trialog: Liaison activity with other FP7 projects
16.06.10	WO?-Kongress (Logistics & Transport) in Duisburg	Escrypt: Objectives of TERESA have been discussed with potential customers
May and June 2010	Visitation of potential customers in different business areas and discussion of TERESA objectives	Escrypt: Transportation industry (11.05.10) Government (25.05.10) Banking industry (28.05.10) Communication industry (16.06.10)
May and June 2010	Establishing contacts to the metering industry in Germany	Siegen
February-April	Preparation of the IEEE international DANCE workshop (http://www.irit.fr/DANCE2010) Discussion to join the to join the IFIP Working Group 10.2 on Embedded Systems	IRIT

3.4.4 Overview of the Work Performed per Partner

The table below briefly describes the work performed by each partner during the quarter.

Activity partner	Description of work performed during the quarter
Trialog	(WP1.1) As a leader of the project Trialog organized the agenda of each meeting, and prepared all phone meeting and led them.
Trialog	(WP1.2) As a leader of the project Trialog submitted all the deliverable due on June the 14th
Trialog	(WP2.1) Trialog proposed a set of criteria for measure of success for D2.1. D2.1 was reviewed by Trialog. Trialog prepared an overview of specificity of the Home Control domain

Trialog	(WP3.1) Trialog led several discussions and brainstorming session to provide a well-defined separation of concern between WP2.T2, WP3.T1 and WP4.T1. Contributed to first set of requirements
Trialog	(WP3.1 and WP4.1) Trialog proposed and architecture and process artefacts of home control. Presentation made during the plenary meeting in Mondragon
Trialog	(WP8.2) Preparation of table of content for PUD Y1
Trialog	(WP8.1) Contact with Serenity Forum which has now a link to the TERESA website
Trialog	(WP8.1) Submission of a workshop in conjunction with ICSE 2011 (not accepted)
UTM-IRIT	(WP3.1, WP4.1, WP4.2, WP4.5) Participation at TERESA meeting Mondragon (Spain) (07-08 june 2010). Requirement Synthesis (WP2-3-4). Lead a discussion on repository structure and requirements
UTM-IRIT	(WP3.2) Proposition of the first set of artefacts to build a common engineering meta model -
UTM-IRIT	(WP4.1 and WP4.2) Proposition of the first version of the repository based modelling
UTM-IRIT	(WP4.3) Proposition of the first version of patterns life cycle
UTM-IRIT	(WP7.1) Consolidation of deliverable D.17 about Analysis of Challenges: A state of the art and challenges of Model driven trust engineering for RCES , S&D pattern integration and Formalization of metrology requirements.
UTM-IRIT	(WP8.1) Management of the first workshop S&D4RCES: website, submissions
UTM-IRIT	(WP8.1) Preparation and submission of various publications (see dissemination in this and future reports)
SIT	(WP5.1) Work on D5.1, the formal validation approach.
SIT	(WP2.2, WP3.1,WP4.x.1) Work on Requirements against Pattern Lifecycle, Repository, …
SIT	(WP5.1) Work on Identification of Dependability related use cases
escrypt	(WP2.1) Support in finding a common understanding (terms, characteristics, use cases)
escrypt	(WP2.2) escrypt described the engineering process of the automotive domain (e.g. tools, standards, certifications)
escrypt	(WP2.2) escrypt has collected and described domain dependent use case examples and identified the associated requirements
escrypt	(WP2.2,3.1,4.x.1) Support in identifying and defining requirements of the four different processes (Pattern Lifecycle Process, Domain Independent Pattern Integration Process, Domain Specific Pattern Integration Process and Formal Validation Process) involved in the development of the TERESA process.
escrypt	(WP4.1.1) escrypt has identified and described domain specific artifacts
escrypt	(WP8.1) Participation to three meetings for dissemination
escrypt	(WP8.2) Visit of potential customers in the business areas
Siegen	(WP7.3) Study of documents relevant for the SeMF approach in formalization of Smart metering requirements.
Siegen	Preparation of relevant documents for the technical meeting in Mondragon
Siegen	(WP7.3) Bilateral meeting with the Fraunhofer SIT in Darmstadt to discuss the use of SeMF for the formalization of lawful metrology requirements
Siegen	(WP3.1) Collection of information about the engineering process in the metrology domain

Siegen	(WP3.1) Provide input for the Definition of the Engineering Process in WP3
Siegen	(WP4.1) Collection of ideas for the pattern repository
Ikerlan-IK4	(WP2.2, WP3.1) Definition of WP2 (D2.2 deliverable) and WP3 (D3.1 deliverable) requirements.
Ikerlan-IK4	(WP2.2, WP3.1) Definition of a first draft (single deliverable) for both deliverables (D2.2 – D3.1). A special effort has been done with TRIALOG to agree on this topic.
Ikerlan-IK4	(WP4.1) Definition of the domain specific artefacts for the repository based on RCES, and dependability.
Ikerlan-IK4	(WP2.1) Coordinating the final version of D2.1 deliverable "Use cases application viewpoint" with the contribution of all the Partners. Final version of the D2.1 deliverable sent to the commission
Ikerlan-IK4	(WP2.2, WP3.1) Coordinating the draft of D2.2 – D3.1 deliverable "Requirements Identification" with the contribution of all the Partners.

3.4.5 Project Effort

3.4.5.1 Budget (person-hours) Consumed in Reporting Period (quarter)

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	144	256	264	604	0	0	0	120	1388
UTM-IRIT	47	53	0	233	0	0	158	187	678
SIT	0	0	0	0	254	0	109	28	391
escrypt	23	129	216	228	0	0	0	72	668
Usiegen	11	212	202	202	103	0	97	13	840
Ikerlan-K4	13	240	217	33	0	0	88	25	616
Totals	238	890	899	1300	357	0	452	445	4581

3.4.5.2 (Estimated) Budget Available in Reporting Period

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	142	51	283	453	0	0	0	113	1043
UTM-IRIT	13	45	235	403	41	0	113	88	938
SIT	12	28	78	0	255	0	128	23	524
escrypt	15	52	155	155	0	0	0	73	449
Usiegen	12	126	187	187	51	0	175	82	819
Ikerlan-K4	13	240	217	33	0	0	88	25	615
Totals	205	543	1154	1231	347	0	504	404	4386

3.4.5.3 (Estimated) Percentage of Budget used with respect to Reporting Period

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	102%	502%	93%	133%	-	-	-	106%	133%
UTM-IRIT	374%	117%	0%	58%	0%	-	140%	212%	72%
SIT	0%	0%	0%	-	100%	-	85%	120%	75%
escrypt	159%	247%	140%	147%	-	-	-	99%	149%
Usiegen	94%	168%	108%	108%	202%	-	55%	16%	103%
Ikerlan-K4	104%	100%	100%	99%	-	-	101%	100%	100%
Totals	116%	164%	78%	106%	103%	-	90%	110%	104%

3.4.5.4 Remaining Budget

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	1216	-408	2006	3204	0	2720	0	1062	9800
UTM-IRIT	104	277	2114	3193	453	1208	821	811	8981
SIT	140	0	700	0	2292	0	992	252	4376
escrypt	102	73	1176	1164	0	2784	0	648	5947
Usiegen	103	208	1478	1478	457	1680	1443	713	7560
Ikerlan-K4	111	240	1516	234	0	2400	786	225	5512
Totals	1776	390	8990	9273	3202	10792	4042	3711	42176

3.4.5.5 Budget Consumed to Date

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	484	918	544	876	0	0	0	298	3120
UTM-IRIT	47	176	0	431	0	0	538	246	1438
SIT	0	280	0	0	508	0	548	28	1364
escrypt	72	449	216	228	0	0	0	222	1187
Usiegen	37	1052	202	202	103	0	657	267	2520
Ikerlan-K4	39	2160	434	66	0	0	264	75	3038
Totals	679	5035	1396	1803	611	0	2007	1136	12667

3.4.5.6 (Estimated) Budget Available to Date

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	425	459	567	907	0	227	2238	113	4936
UTM-IRIT	37	339	313	403	296	111	1659	88	3245
SIT	41	373	309	309	0	145	1182	23	2383
escrypt	35	1134	373	373	102	163	2190	82	4453
Usiegen	35	1134	373	373	102	163	2190	82	4453
Ikerlan-K4	38	2160	433	67	0	50	2038	25	4810
Totals	610	5599	2369	2432	499	860	11497	413	24278

3.4.5.7 (Estimated) Percentage of Budget Used

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	114%	200%	96%	97%	-	0%	0%	263%	63%
UTM-IRIT	128%	52%	0%	107%	0%	0%	32%	279%	44%
SIT	0%	75%	0%	0%	u	0%	46%	120%	57%
escrypt	206%	40%	58%	61%	0%	0%	0%	272%	
Usiegen	206%	40%	58%	61%	0%	0%	0%	272%	27%
Ikerlan-K4	104%	100%	100%	99%	-	0%	13%	300%	63%
Totals	111%	90%	59%	74%	122%	0%	17%	275%	52%

3.4.5.8　Budget Analysis

TERESA Budget Analysis

	Trialog	UTM-IRIT	SIT	escrypt	Usiegen	Ikerlan-K4	Totals
Used	3120	1438	1364	1187	2520	3038	11531
Remaining	9800	8981	4376	5947	7560	5512	43312
Budget	12920	10419	5740	7134	10080	8550	54843
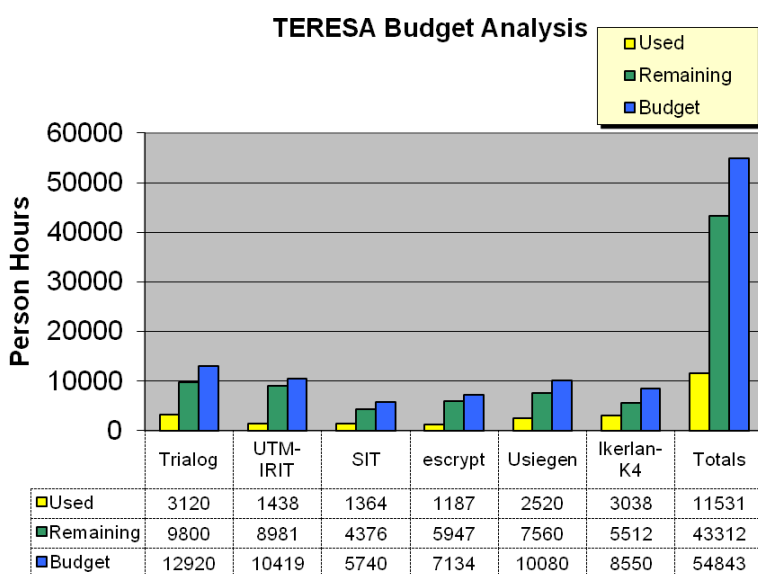
Company

3.4.6　Project Management during the Period

3.4.6.1　Main Achievements

- Organisation of meetings and conference calls
- Administration (web site, workspace, financial aspects)
- Update of handbook
- Review and submission of all deliverables to the European Commission

3.4.6.2　Problems Encountered

- No common engineering process in the metering domain
- It seems to make sense to only provide one document for the requirements of WP2, WP3 and WP4.
- A clear organization of the requirements document coping with the TERESA vision has to be made.
- Rejection without reason of a workshop in conjunction with ICSE 2011

3.4.6.3　Deviations from Plan

- None

3.4.6.4　Project Meetings

Title	Date and Place	Main Conclusions
Conference call	12 May 2010	State of the submission of deliverables and Separation of concerns about requirements
Plenary Meeting	Mondragon, 07 June 2010	Separation of concerns may not be the best way to achieve the tasks. First set of requirements has been proposed. First collection of artifacts from domain application has been done. A more complete set of requirement has to be defined between Ikerlan, Trialog, Irit and SIT
Conference call	9 July 2010	New requirements defined ; it needs a better structure for the final document. Introduction of requirement on pattern life cycle

3.5 Fourth Quarter (August, September and October 2010

WP2 Use cases and requirements
- Finalization of the Requirements document

WP3 Definition of engineering process
- Finalization of the Requirements document
- Description of the TERESA vision in a secure engineering process
- First meta-model of the common engineering process

WP4 Repository
- Finalization of the requirement document
- Implementation of the first version of the repository as Relational Data Base

WP5 Formal Validation
- Finalization of the approach for TERESA
- Refinements of some Use Case to comply with the information needed by the Formal Validation

WP7 Challenge for RCES trust
- First formalization of Smart Metering Requirements

WP8 Link to the industry and reach out
- ACM S&D4RCES workshop organized by the TERESA consortium in coordination with SAFECOMP 2010 in Vienna(Austria)
- 3 papers presented during the S&D4RCES workshop by TERESA partners
- Finalisation of the TERESA factsheet

3.5.1 Overview of the Work Performed by Task

Year 1 Workpackages and Tasks	Date	Estimed % of achievement
WP2 Use Cases and Requirements	M1- M12	
T1 Use Cases and Common Understanding	M1 - M6	Completed
T2 Requirements	M4 - M12	97%
WP3 Definition of Engineering Process	M4 - M30	
T1 Requirements	M4 - M12	97%
WP4 Repository	M4 - M30	
T1 Repository structure	M4 - M30	
T1.1 Requirements	M4 - M12	97%
T2 Models	M4 - M30	
T2.1 Requirements	M4 - M12	97%
T3 Patterns	M4 - M30	
T3.1 Requirements	M4 - M12	97%
WP5 Formal Validation	M4 - M36	
T1 Specification of formal validation approach	M4 - M12	97%
WP7 Challenges for RCES Trust	M1 - M36	
T1 Model Driven Trust Engineering for RCES	M1 - M36	
T1.1 State of the art	M1 - M6	Completed
T1.2 Research 1	M7 - M24	13%
T2 Integration of S&D patterns	M1 - M36	
T2.1 State of the art	M1 - M6	Completed

T2.2 Research 1	M7 - M24	13%
T3 Formal Validation of Metrology Requirements	M1 - M36	
T3.1 State of the art	M1 - M6	Completed
T3.2 Research 1	M7 - M24	13%

3.5.2 Dissemination and Promotional Information

Date	Title	Number of persons attended + other information
2010	Participation at the Workshop on Cryptographic Hardware and Embedded Systems 2010 (CHES 2010, Santa Barbara, USA)	USiegen
14.09.2010	Presentation of the paper "Formalization of Smart Metering Requirements" at the S&D4RCES workshop of the Safecomp 2010 Conference in Vienna	USiegen & SIT – first workshop organized by the TERESA project
14.09.2010	Presentation of the talk Towards the Integration of Advanced Eng. Paradigms into RCES: Raising the issues for the Safety-Critical Model-Driven Product-Line Case " at the S&D4RCES workshop of the Safecomp 2010 Conference in Vienna	IKERLAN-IK4 & Univ of toulouse – first workshop organized by the TERESA project
04.08.2010	Research Project RESIST in Darmstadt	Escrypt: Discussion of TERESA ideas with RESIST partners
02.09.2010	BITKOM Workshop for Smart Energy, Smart Metering in Bonn	Escrypt: Discussion about the idea of a validated engineering process to simplify the type approval procedure
21.09.2010	Industry workshop for security	Escrypt: Visiting of an industry workshop for security and discussion of TERESA approach with potential customers
22.09.2010	Metering and Billing Europe in Vienna	Escrypt: Discussion of TERESA ideas with potential customers
06.10.2010	Security 2010 in Essen	Escrypt: Discussion of TERESA ideas with potential customers and distribution of the TERESA factsheet
19.10.2010	ITSA in Nuremberg	Escrypt: Search for new partners interested in the TERESA engineering approach
August and September 2010	Visitation of potential customers in different business areas and discussion of TERESA objectives	Escrypt: Mobile Communication Industry (25.08.2010) Government (16.09.2010)
22.09.2010	Visitation of potential customers from railway and wind turbines sector and discussion of TERESA objectives	Ikerlan-Ik4: CAF (1.09.2010) Alstom Wind (2.09.2010)
August-September	Participation on the 8th Nordic Workshop on Model Driven Software Engineering (NW-MODE 2010) and presentation of a paper titld "Model-Based Engineering for Dynamic Reconfiguration in DRTES" Authors:Brahim Hamid, Fatma Krichen (IRIT) Host of the ACM international SD4RCES workshop (http://www.irit.fr/SD4RCES). and	IRIT

	participation in the SAFECOMP conference Discussion to join the EWICS TC7 (European Workshop on Industrial Computer Systems, Technical Committee 7 : Reliability, Safety, Security) Discussion to join the ARTIST network Models conference attendee	
14.09.2010	Presentation of a paper with TRIALOG titled "Model-Based Security and Dependability Patterns in RCES – the TERESA Approach" Authors: Brahim Hamid, Nicolas Desnos (IRIT, University of Toulouse), Cyril Grepet, Christophe Jouvray (Trialog)	IRIT & Trialog

3.5.3 Overview of the Work Performed per Partner

The table below briefly describes the work performed by each partner during the quarter.

Activity partner	Description of work performed during the quarter
Trialog	(WP1.1) As a leader of the project Trialog organized the agenda of each meeting, and prepared all phone meeting and led them.
Trialog	(WP2.2, W3.1, W4.1) : a. Definition of a conceptual model. This model formalises partners to have a common understanding of all terms used in the requirements. b. Reorganisation of the requirements in order to highlight the separation of WP requirements. c. Identification of the requirements d. Proposition of the TERESA vision.
Trialog	(WP3.2) a. Identification of home control needs regarding to the process. b. With IRIT, we start to unify all process needs by the TERESA metamodel. This version of the metamodel is a sketch and will be enforced during the next months.
Trialog	(WP4.2) With IRIT, we start to formalise the concept of pattern and repository pattern from the TERESA point of view.
Trialog	(WP1.2) Preparation of deliverable D1.1 to be submit before December the 31th
Trialog	(WP8.2) Preparation of D8.3 – new version including partners revision
Trialog	(WP8.1) Participation in the S&D4RCES program committee and review of submitted papers
Trialog	(WP8.1) Trialog attended the S&D4RCES with a presentation about Thrust in the TECOM project and a presentation about the TERESA project
UTM-IRIT	(WP8.1) Hosted the S&D4RCES workshop in Vienna (Austria) September 14, 2010 – WP8
UTM-IRIT	(WP1.1) Coordination TERESA meeting in Toulouse (France) (07-08 September 2010)
UTM-IRIT	(WP2.1, WP3.1, WP4.1) Participation at TERESA meeting in Paris (France) (September 27 2010) about Requirement Synthesis
UTM-IRIT	(WP4.1) Implementation of the first version of the repository as Relational Data Base (WP4)
UTM-IRIT	(WP3.2) Working on the consolidation of the set of artefacts to build a common engineering meta model
UTM-IRIT	(WP8.1) Preparation and submission of various publications (see dissemination in this and future reports)
SIT	(WP4.1) Work on D5.1, the formal validation approach.
SIT	(WP2.1) Work on refined versions of Use Cases and Patterns.

SIT	(WP4.1) Work on Requirements against Pattern Lifecycle, Repository, …
SIT	(WP7.3) Collaborated work with UniSiegen on Formalization of Smart Metering Requirements
escrypt	(WP3.1) escrypt described the tasks and activities of the actors and roles that are integrated in the pattern integration process in the automotive domain
escrypt	(WP2.2,3.1) escrypt has defined domain dependent use case examples and identified the associated requirements
escrypt	(WP2.2,3.1) escrypt has established the domain specific information required to specify the steps of the pattern integration process that has to be performed by the different roles to integrate the patterns
escrypt	(WP2.2, 3.1) As preparation for the META Model escrypt specified the domain specific interaction that is necessary between the different engineering roles
escrypt	(WP2.2, 3.1, 4.x.1) Support in identifying and defining requirements of the four different processes (Pattern Lifecycle Process, Domain Independent Pattern Integration Process, Domain Specific Pattern Integration Process and Formal Validation Process) involved in the development of the TERESA process
Siegen	(WP3.1) Collection of requirements for the Engineering process for D3.1
Siegen	(WP8.1) Preliminary work to issue the paper "Formalization of Smart Metering Requirements" at the Safecomp Conference 2010 in Vienna
Siegen	(WP8.1) Evaluation of the results of the Workshop on Cryptographic Hardware and Embedded Systems 2010 (CHES 2010, Santa Barbara, USA)
Siegen	(WP5.1) Collection of ideas towards the matching of formally validated patterns against security and functional requirements
Siegen	(WP2.2) Extend use cases and sequence diagrams of WP2 with information necessary for the formal validation
Siegen	(WP1.2) Preparation of cost statements for the reports
Ikerlan-IK4	(WP2.2) Complete the definition of the requirements related to the D2.2 deliverable.
Ikerlan-IK4	(WP3.1, WP4.1) Contribution for the requirement identification for the D3.1 and D4.1 deliverables.
Ikerlan-IK4	(WP2.2, WP3.1, WP4.1) Definition of a single deliverable for D2.2, D3.1 and D4.1 deliverables – "Requirements Identification".
Ikerlan-IK4	(WP3.1) Definition of the domain dependent information (development process, actors, roles, and actions) for the definition of the meta-model engineering process.
Ikerlan-IK4	(WP2.2, WP3.1, WP4.1) Collaborating in the first version (Document structure definition, description of TERESA vision, and others) for D2.2 – D3.1 – D4.1 deliverable "Requirements Identification" with the contribution of all the Partners. A special effort has been done with TRIALOG, and IRIT to agree on this topic
Ikerlan-IK4	(WP3.1) The domain dependent information (development process, actors, roles, etc) required for the definition of a first version of the meta-model engineering process has been provided to IRIT)
Ikerlan-IK4	(WP3.1) IK4 collect the general and domain specific requirements on the engineering process, from the engineering viewpoint based on existing industry involvement and focusing on dependability

3.5.4 Project Effort

3.5.4.1 Budget (person-hours) Consumed in Reporting Period (quarter)

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	144	192	288	596	0	0	0	0	1220
UTM-IRIT	12	280	280	397	0	0	35	140	1144
SIT	0	0	0	0	247	0	109	39	395
escrypt	6	73	132	120	0	0	0	72	403
Usiegen	11	208	201	201	105	0	71	43	840
Ikerlan-K4	13	240	217	33	0	0	88	0	591
Totals	186	993	1118	1347	352	0	303	294	4593

3.5.4.2 (Estimated) Budget Available in Reporting Period

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	142	51	283	453	0	0	0	0	929
UTM-IRIT	13	45	235	403	41	0	113	0	850
SIT	13	45	235	403	41	0	113	0	850
escrypt	12	28	78	0	255	0	128	0	500
Usiegen	15	52	155	155	0	0	0	0	376
Ikerlan-K4	13	240	217	33	0	0	88	0	590
Totals	206	462	1202	1447	337	0	442	0	4095

3.5.4.3 (Estimated) Percentage of Budget Used with respect to Reporting Period

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	102%	376%	102%	131%	-	-	-	-	131%
UTM-IRIT	95%	618%	119%	99%	0%	-	31%	u	135%
SIT	0%	0%	0%	0%	600%	-	96%	u	46%
escrypt	51%	261%	170%	u	0%	-	0%	u	81%
Usiegen	76%	398%	130%	130%	u	-	u	u	223%
Ikerlan-K4	104%	100%	100%	99%	-	-	101%	-	100%

3.5.4.4 Remaining Budget

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	1072	-600	1718	2608	0	2720	0	1062	8580
UTM-IRIT	92	-3	1834	2796	453	1208	786	671	7837
SIT	140	0	700	0	2045	0	883	213	3981
escrypt	96	0	1044	1044	0	2784	0	576	5544
Usiegen	92	0	1277	1277	352	1680	1372	670	6720
Ikerlan-K4	98	0	1299	201	0	2400	698	225	4921
Totals	1590	-603	7872	7926	2850	10792	3739	3417	37583

3.5.4.5 Budget Consumed to Date

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	628	1110	832	1472	0	0	0	298	4340
UTM-IRIT	59	456	280	828	0	0	573	386	2582
SIT	0	280	0	0	755	0	657	67	1759

escrypt	78	522	348	348	0	0	0	294	1590
Usiegen	48	1260	403	403	208	0	728	310	3360
Ikerlan-K4	52	2400	651	99	0	0	352	75	3629
Totals	865	6028	2514	3150	963	0	2310	1430	17260

3.5.4.6 (Estimated) Budget Available to Date

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	567	510	850	1360	0	227	3168	113	6794
UTM-IRIT	49	384	548	805	337	111	2509	88	4831
SIT	52	401	387	309	255	145	1682	23	3255
escrypt	50	1186	528	528	102	163	2566	82	5205
Usiegen	50	1186	528	528	102	163	2566	82	5205
Ikerlan-K4	50	2400	650	100	0	50	2628	25	5903
Totals	817	6067	3491	3631	795	860	15119	413	31192

3.5.4.7 (Estimated) Percentage of Budget Used

	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	Total
Trialog	111%	218%	98%	108%	-	0%	0%	263%	64%
UTM-IRIT	119%	119%	51%	103%	0%	0%	23%	438%	53%
SIT	0%	70%	0%	0%	297%	0%	39%	287%	54%
escrypt	158%	44%	66%	66%	0%	0%	0%	360%	
Usiegen	158%	44%	66%	66%	0%	0%	0%	360%	31%
Ikerlan-K4	104%	100%	100%	99%	-	0%	13%	300%	61%
Totals	106%	99%	72%	87%	121%	0%	15%	346%	55%

3.5.4.8 Budget Analysis

TERESA Budget Analysis

	Trialog	UTM-IRIT	SIT	escrypt	Usiegen	Ikerlan-K4	Totals
Used	4340	2582	1759	1590	3360	3629	15830
Remaining	8580	7837	3981	5544	6720	4921	39013
Budget	12920	10419	5740	7134	10080	8550	54843
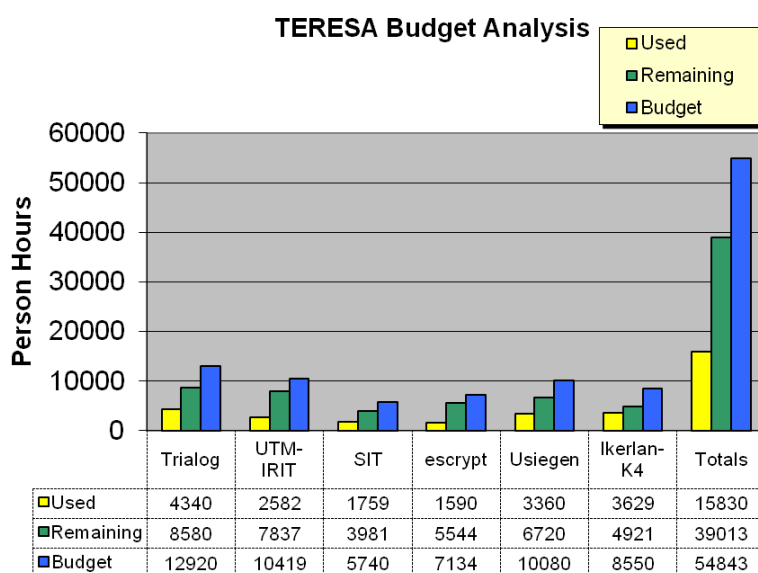
Company

3.5.5 Project Management during the Period

3.5.5.1 Main Achievements

- Organisation of meetings and conference calls
- Administration (web site, workspace, financial aspects)
- Update of handbook
- Review and submission of all deliverables to the European Commissio
- Preparation and Organisation of the Annual Review

3.5.5.2 Problems Encountered

- No common engineering process in the metering domain
- It seems to make sense to only provide one document for the requirements of WP2, WP3 and WP4.
- A clear organization of the requirements document coping with the TERESA vision has to be made.

3.5.5.3 Deviations from Plan

- Find the relation between the requirements of WP2 – WP3 and WP4 has been challenged. Re-organization of the D2.2 – D3.1 – D4.1 deliverable "Requirements Identification" was considered. A specific meeting was held in Paris to carry out this task. A special effort has been done between Ikerlan, TRIALOG and IRIT to establish a new structure of the deliverable, organize the requirements, define a common understanding for the requirement specification, and establish clearly the scope of each WP in the deliverable. For that reason, an additional trip has been needed for IRIT and Ikerlan to Paris.
- Slight delay of D5.1 until December.
- Slight delay in the review of the D8.1.
- Slight delay in the finalization of the joint Requirements document
- Decision to move the effort of USiegen and IRIT in WP5 from Task 1 to Task 3. That makes sense because their contribution will be more valuable in the last task.

3.5.5.4 Project Meetings

Title	Date and Place	Main Conclusions
Plenary Meeting	Toulouse, 07 September 2010	Main subjects were the Vision of TERESA as well as the repository structure and definition. From the discussion a result will be achieved before the end of the quarter
Conference call	8 October	Status of deliverable. Escrypt propose to move the plenary Meeting to Essen in Zollverein
Conference call	29 October	Status of deliverable and preparation of the next plenary meeting in Essen

Table 1. Deliverables										
Del. no.	Deliverable name	Version	WP no.	Lead beneficiary	Nature	Dissemination level[4]	Delivery date from Annex I (proj month)	Actual / Forecast delivery date Dd/mm/yyyy	Status No submitted/ Submitted	Contract ual Yes/No	Comments
D1.1	Year1 Management Report	1	1	Trialog	Report	CO	M12	M12		Yes	
D1.4	Project Presentation	1	1	Trialog	Report	PU	M3	14/06/2010	Submitted	Yes	Submitted with delay
D2.1	Use Cases Application Viewpoint	1	2	Ikerlan	Report	PU	M6	14/06/2010	Submitted	Yes	Submitted with delay but within the 45 days
D2.2	Requirements Application Viewpoint	1	2	Ikerlan	Report	PU	M12		Submitted	Yes	Joint document with D3.1 and D4.1
D3.1	Requirement Engineering Viewpoint	1	3	Trialog	Report	PU	M12		Submitted	Yes	Joint document with D2.2 and D4.1
D4.1	Requirements on Repository	1	4	IRIT	Report	CO	M12		Submitted	Yes	Joint document with D2.2 and D3.1
D5.1	Formal Validation Approach	1	5	SIT	Report	PU	M12			Yes	
D7.1	Analysis of Challenges	1	7	IRIT	Report	PU	M6	14/06/2010	Submitted	Yes	Submitted with delay but within the 45 days
D8.1	Dissemination Material	1	8	Trialog	??		M6	14/06/2010	Submitted	Yes	Submitted with delay but within the 45 days
D8.3	PUD Year 1	1	8	Trialog	Report	CO	M12			Yes	

---

4   PU = Public
PP = Restricted to other programme participants (including the Commission Services).
RE = Restricted to a group specified by the consortium (including the Commission Services).
CO = Confidential, only for members of the consortium (including the Commission Services).
Make sure that you are using the correct following label when your project has classified deliverables.
EU restricted = Classified with the mention of the classification level restricted "EU Restricted"
EU confidential = Classified with the mention of the classification level confidential " EU Confidential "
EU secret = Classified with the mention of the classification level secret "EU Secret "

4 Deliverables and Milestones Tables

4.1 Milestones

Please complete this table if milestones are specified in Annex I to the Grant Agreement. Milestones will be assessed against the specific criteria and performance indicators as defined in Annex I.

This table is cumulative, which means that it should always show all milestones from the beginning of the project.

	Milestone name	WP	Lead Beneficiary	Sub-milestones	Planned date I	Achieved Yes/No	Actual/ Forecast achievement date	Comments
					Table 2. Milestones			
M1	Requirements	2	Ikerlan	Application Requirements	11/2010	Yes	11/2010	Requirements defined (D2.2)
		3	Trialog	Engineering Requirements		Yes		Requirements defined(D3.1)
		4	IRIT	Repository Requirements		Yes		Requirements defined(D4.1)
		5	SIT	Formal Validation approach		Yes		Approach defined(D5.1)
M2	Specification	3	Trialog	Common process metamodel	05/2011		05/2011	
		3	Trialog	Common trust meta-model				
		4	UTM-UTM	Repository structure				
		4	UTM-UTM	Requirements for tools				
M3	Engineering environment initial version	4	UTM-UTM	Domain models v1	11/2011		11/2011	
		4	UTM-UTM	Domain patterns v1				
		3	Trialog	Domain sector process v1				
		5	SIT	Formal validation v1				
M4	Engineering environment validated	4	UTM-UTM	Domain models v2	05/2012		05/2012	
		4	UTM-UTM	Domain patterns v2				
		3	Trialog	Domain sector process v2				
		3	UTM-UTM	Tools				
		4	SIT	Formal validation v2				
		5	escrypt	Integration in domain applications				
M5	Evaluation	6	escrypt	Evaluation	11/2012		11/2012	
		7	USiegen	Further challenges				

5 Explanation of the Use of the Resources

Please provide an explanation of personnel costs, subcontracting and any major costs incurred by each beneficiary, such as the purchase of important equipment, travel costs, large consumable items, etc., linking them to work packages.

There is no standard definition of "major cost items". Beneficiaries may specify these, according to the relative importance of the item compared to the total budget of the beneficiary, or as regards the individual value of the item.

These can be listed in the following tables (one table by participant):

Table 5-1 : Personnel, subcontracting and other major cost items for Beneficiary 1 for the period (Trialog)			
Work Package	**Item description**	**Amount**	**Explanations**
	Personnel costs		Quarter 1
			Organisation of kick off meeting in Paris
			Organisation of one Conference calls.
			Administrative work (web site, logo, workspace, templates)
			Project handbook deliverable
			Template for quarterly mgt use case
			Initial work on WP2 : Home control use cases and patterns
			Investigation on Patterns Template, Patterns Classification
			Quarter 2
			Organisation of meetings
			Organisation of Conference calls.
			Administrative work (web site, logo, workspace, templates)
			Contribution to D2.1 deliverable
			Update of web site.
			Quarter 3
			Organisation of meetings
			Organisation of Conference calls.
			Administrative work (mgt report, submission of deliverables)
			Dissemination in OVERSEE meeting
			Initial work on WP2.2 and WP3.1
			Description of the TERESA vision
			Web site.
			Quarter 4
			Organisation of meetings
			Organisation of Conference call.
			Administrative work (mgt report, submission of deliverables)
			Dissemination in the S&D4RCES international workshop
			Contribution to joint D2.2, D3.1, D4.1 deliverable
			Web site.
	Subcontracting		
	Major cost item 'X'		
	Major cost item 'Y' ………..		Travel expenses
	Remaining costs		

TOTAL DIRECT COSTS AS CLAIMED ON FORM C			

* The entries in italics are examples and purely for illustration.

Table 5-2 : Personnel, subcontracting and other major cost items for Beneficiary 2 for the period (UTM-IRIT)			
Work Package	**Item description**	**Amount**	**Explanations**
	Personnel costs		
	Subcontracting		
	Major cost item 'X'		
	Major cost item 'Y' ………..		Travel expenses
	Remaining costs		
TOTAL DIRECT COSTS AS CLAIMED ON FORM C			

Table 5-3 : Personnel, subcontracting and other major cost items for Beneficiary 3 for the period (SIT)			
Work Package	**Item description**	**Amount**	**Explanations**
	Personnel costs	80,090	
	Subcontracting		
	Major cost item 'X'		
	Major cost item 'Y' ………..	3,827	Travel expenses
	Remaining costs	73,632	
TOTAL DIRECT COSTS AS CLAIMED ON FORM C		157,549	NA

Table 5-4 : Personnel, subcontracting and other major cost items for Beneficiary 4 for the period (Escrypt)			
Work Package	**Item description**	**Amount**	**Explanations**
	Personnel costs		
	Subcontracting		
	Major cost item 'X'		
	Major cost item 'Y' ………..		Travel expenses
	Remaining costs		
TOTAL DIRECT COSTS AS CLAIMED ON FORM C			

Table 5-5 : Personnel, subcontracting and other major cost items for Beneficiary 5 for the period (U.Siegen)			
Work Package	**Item description**	**Amount**	**Explanations**
	Personnel costs	100,094	
	Subcontracting		

	Major cost item 'X'		
	Major cost item 'Y' ………..	11,382	Travel expenses
	Remaining costs	66,885	
TOTAL DIRECT COSTS AS CLAIMED ON FORM C		178,361	NA

Table 5-6 : Personnel, subcontracting and other major cost items for Beneficiary 4 for the period (Ikerlan-k4)			
Work Package	**Item description**	**Amount**	**Explanations**
	Personnel costs		
	Subcontracting		
	Major cost item 'X'		
	Major cost item 'Y' ………..		Travel expenses
	Remaining costs		
TOTAL DIRECT COSTS AS CLAIMED ON FORM C			

The following table is required only for the funding schemes for Research for the benefit of SMEs
THE TRANSACTION
Please provide a list of the actual cost incurred by the RTD performers during the performance of the work subcontracted to them. These costs refer only to the agreed '**Transaction'**.

Name of RTD Performer	Number of person months	Personnel Costs (€)	Durable equipment	Consumables	Computing	Overhead Costs (€)	Other Costs (€)	Total by RTD performer
TOTAL								

6 Financial Statements: Form C, Summary Financial Report

Please submit a separate financial statement from each beneficiary (if Special Clause 10 applies to your Grant Agreement, please include a separate financial statement from each third party as well) together with a summary financial report which consolidates the claimed Community contribution of all the beneficiaries in an aggregate form, based on the information provided in Form C (Annex VI) by each beneficiary.

When applicable, certificates on financial statements shall be submitted by the concerned beneficiaries according to Article II.4.4 of the Grant Agreement.

Besides the electronic submission, Forms C as well as certificates (if applicable), have to be signed and sent in parallel by post.

IMPORTANT:

Form C varies with the funding scheme used. Please make sure that you use the correct form corresponding to your project (Templates for Form C are provided in Annex VI to the Grant Agreement). An example for collaborative projects is enclosed hereafter.

A Web-based online tool for completing and submitting forms C is accessible via the Participant Portal: http://ec.europa.eu/research/participants/portal, (except for projects managed by DG MOVE and ENER).

If some beneficiaries in security research have two different rates of funding (part of the funding may reach 75%[5]) then two separate financial statements should be filled by the concerned beneficiaries and two lines should be entered for these beneficiaries in the summary financial report.

---

[5] Article 33.1 of the EC FP7 rules for participation - REGULATION (EC) No 1906/2006.

FP7 - Grant Agreement - Annex VI - Collaborative Project

Form C - Financial Statement (to be filled in by each beneficiary)

Project nr	nnnnnn	Funding scheme	Collaborative Project
Project Acronym	xxxxxxxxxxxxxxxxxxxx		

Period from	dd/mm/aa	Is this an adjustment to a previous statement ?	Yes/No
To	dd/mm/aa		

Legal Name		Participant Identity Code	nn
Organisation short Name		Beneficiary nr	nn

Funding % for RTD activities (A)		If flat rate for indirect costs, specify %	%

1- Declaration of eligible costs/lump sum/flate-rate/scale of unit (in €)

	Type of Activity				
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	TOTAL (A+B+C+D)
Personnel costs					
Subcontracting					
Other direct costs					
Indirect costs					
Lump sums/flat-rate/scale of unit declared					
Total					
Maximum EC contribution					
Requested EC contribution					

2- Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II.17 of the grant agreement ?

If yes, please mention the amount (in €)

Yes/No

3- Declaration of interest yielded by the pre-financing (to *be completed only by the coordinator*)

Did the pre-financing you received generate any interest according to Art. II.19 ?

If yes, please mention the amount (in €)

Yes/No

4. Certificate on the methodology

Do you declare average personnel costs according to Art. II.14.1 ?

Yes/No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art. II.4.4 ?

Yes/No

Name of the auditor		Cost of the certificate (in €), if charged under this project	

5- Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

Yes/No

Name of the auditor		Cost of the certificate (in €)	

6- Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;

- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art. II.17 of the grant agreement;

- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art. II.19 of the grant agreement ;

- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	Date & signature

FP7 - Grant Agreement - Annex VI - Collaborative Project

Form C - Financial Statement (to be filled in by Third Party) Only applicable if special clause nr 10 is used

Project nr	nnnnnn	Funding scheme	Collaborative Project
Project Acronym	xxxxxxxxxxxxxxxxxxxx		

Period from	dd/mm/aa	Is this an adjustment to a previous statement ?		Yes/No
To	dd/mm/aa			

3rd party legal Name			
3rd party Organisation short Name		Working for beneficiary nr	nn

Funding % for RTD activities (A)		If flat rate for indirect costs, specify %	%

1- Declaration of eligible costs/lump sum/flate-rate/scale of unit (in €)

	Type of Activity				
	RTD (A)	Demonstration (B)	Management (C)	Other (D)	TOTAL (A+B+C+D)
Personnel costs					
Subcontracting					
Other direct costs					
Indirect costs					
Lump sums/flat-rate/scale of unit declared					
Total					
Maximum EC contribution					
Requested EC contribution					

2- Declaration of receipts

Did you receive any financial transfers or contributions in kind, free of charge from third parties or did the project generate any income which could be considered a receipt according to Art.II.17 of the grant agreement ?

Yes/No

If yes, please mention the amount (in €)

3- Declaration of interest yielded by the pre-financing (*to be completed only by the coordinator*)

Did the pre-financing you received generate any interest according to Art. II.19 ?

Yes/No

If yes, please mention the amount (in €)

4. Certificate on the methodology

Do you declare average personnel costs according to Art. II.14.1 ?

Yes/No

Is there a certificate on the methodology provided by an independent auditor and accepted by the Commission according to Art. II.4.4 ?

Yes/No

Name of the auditor		Cost of the certificate (in €), if charged under this project	

5- Certificate on the financial statements

Is there a certificate on the financial statements provided by an independent auditor attached to this financial statement according to Art.II.4.4 ?

Yes/No

Name of the auditor		Cost of the certificate (in €)	

6- Beneficiary's declaration on its honour

We declare on our honour that:

- the costs declared above are directly related to the resources used to attain the objectives of the project and fall within the definition of eligible costs specified in Articles II.14 and II.15 of the grant agreement, and, if relevant, Annex III and Article 7 (special clauses) of the grant agreement;

- the receipts declared above are the only financial transfers or contributions in kind, free of charge, from third parties and the only income generated by the project which could be considered as receipts according to Art. II.17 of the grant agreement;

- the interest declared above is the only interest yielded by the pre-financing which falls within the definition of Art. II.19 of the grant agreement ;

- there is full supporting documentation to justify the information hereby declared. It will be made available at the request of the Commission and in the event of an audit by the Commission and/or by the Court of Auditors and/or their authorised representatives.

Beneficiary's Stamp	Name of the Person(s) Authorised to sign this Financial Statement
	Date & signature

FP7 - Grant Agreement - Annex VI - Collaborative Project

Summary Financial Report - Collaborative Project- to be filled in by the coordinator

| Project acronym | xxxxxxxxxxxxxxxxxxxxxxxxx | Project nr | nnnnnn | Reporting period from | dd/mm/aa | to: | dd/mm/aa | | Page | 1/1 |

Funding scheme	CP						Type of activity								Total (A)+(B)+(C)+(D)			
Beneficiary n°	If 3rd Party, linked to beneficiary	Adjustment (Yes/No)	Organisation Short Name	RTD (A)		Demonstration (B)		Management (C)		Other (D)				Total	Max EC Contribution	Receipts	Interest		
				Total	Max EC Contribution	Total	Max EC Contribution	Total	Max EC Contribution	Total	Max EC Contribution			Total	Max EC Contribution				
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			
16																			
17																			
18																			
19																			
20																			
21																			
22																			
23																			
24																			
25																			
		TOTAL																	

Requested EC contribution for the reporting period (in €)