



Combined Requirements for Co-operative Systems

Main Document

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Abbreviations and Definitions

| Abbreviation | Definition |
|---------------------|--|
| EC | European Commission |
| FRAME | The short name for the European ITS Framework Architecture |
| IP | Integrated Project, e.g. COOPERS, CVIS and SAFESPOT |
| SP | Sub-Project – applies to both CVIS and SAFESPOT |
| UN | User Need |
| WP | Work Package |

Note: abbreviations that are specific to particular Annexes are listed in their documents.

Executive Summary

The Requirements produced by the three Co-operative Systems Integrated Projects have been successfully mapped to the existing FRAME User Needs. Where no mapping has been found, many new FRAME User Needs have been created.

Although a large number of the existing FRAME User Needs have been mapped to the Requirements from the Co-operative Systems Projects, there are also a substantial number of new User Needs. Some form of "search tool" needs to be developed to aid users in the search for the FRAME User Needs that they want to use.

1. Introduction

1.1 Purpose

The purpose of this document is to define a combined set of requirements for the three main European Commission (EC) funded Co-operative Systems Integrated Projects (IP), i.e. COOPERS, CVIS and SAFESPOT. These requirements will be shown in a format, structure and style that is directly compatible with that used in the User Needs for the European ITS Framework Architecture (often called "FRAME", a name that will be used in the rest of this document).

1.2 Document Structure

The structure of this document is arranged so that it starts with a brief description (Chapter 2) of the methodology that has been used to create the combined requirements.

Chapter 2 is followed by three Chapters that describe the source of information that has been obtained from the documents created by each of the Projects. Chapter 3 describes what has been obtained from the COOPERS Project documents, and is followed by Chapter 4 for CVIS and Chapter 5 for SAFESPOT. Each of these Chapters also shows how the information from each Project has been mapped to the FRAME User Needs and identifies the new Users Needs that have been added because there is no mapping.

This is then followed by a Chapter (6) that shows how the FRAME style User Needs from each Project have been combined into a single set of User Needs. All of the new User Needs have been created using the FRAME format and style and have been fitted into their structure.

The Requirements from each of the projects that have been mapped to the FRAME User Needs and the results of this mapping are provided in a set of Annexes to this Main Document. The list of Annexes is as follows:

Annex 1: CVIS Requirements

Annex 2: SAFESPOT Requirements

Annex 3: COOPERS Requirements

Annex 4: FRAME User Needs

Annex 5: New FRAME User Needs

Annex 6: Mapped FRAME User Needs

The complete list of FRAME User Needs to which the mapping has been made is included for completeness and also because it is likely that they will change after the completion of the work described in this Document. The changes will be the result of separate work being done on behalf of the FRAME Forum and as part of the EC funded E-FRAME project.

2. Background and Methodology

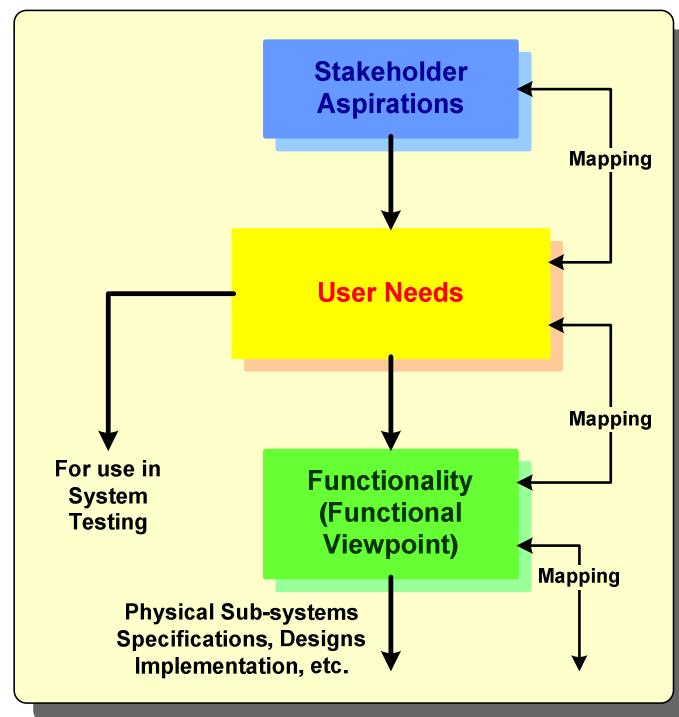
2.1 Introduction

This section of the document provides an overview of where the FRAME User Needs fit into the high-level architecture creation process that is used by FRAME and what they are. This is followed by a brief description of the methodology that has been used to create the combined requirements for the three main Co-operative Systems Projects.

2.2 The place of User Needs in the ITS architecture development process

User Needs are the formal expression of Stakeholder Aspirations. They define the functionality that the ITS architecture needs to contain if the ITS implementation described in the Stakeholder Aspirations is to achieve the benefits that the Stakeholders want to provide. Thus User Needs provide the link between the Aspirations and the functionality in the ITS architecture. This is illustrated by Figure 1 below.

Figure 1 The place of User Needs in the ITS architecture development process



The Stakeholder Aspirations are written in the Stakeholders' own words. Thus they may not follow a rigorous definition format and can therefore be difficult to interpret, or open to several different interpretations. User Needs solve this problem by providing a rigorous definition of the Aspirations that must be reviewed and agreed before the ITS architecture is created. They can and should also be used as the starting point for defining the criteria against which completed Systems are tested.

2.3 User Needs and Requirements

Some of the Cooperative Systems projects have created both “Requirements” and “User Needs”. Where this occurs, the “Requirements” appear to be between the “User Needs” and the creation of the functionality in the projects’ architectures. Most of the “Requirements” are classified into “functional” and “non-functional”.

For the work described in this document, the mapping to the FRAME User Needs has been done for the “Requirements”. This is because in the FRAME methodology, its User Needs fulfil the role of the “Requirements” and the “User Needs” in the architecture work carried out by some of the Cooperative Systems projects. In FRAME there is no division of its User Needs into “functional” and “non-functional” types but there is a recognition that some are concerned with functionality and others are concerned with other architectural aspects such as the physical implementation, or the communications that will be needed between different part of the architecture’s overall functionality.

2.4 FRAME User Needs

2.4.1 Introduction

These were originally produced by the EC funded KAREN Project in 2000. Since then they have been modified by the EC funded FRAME-S project to create Version 3, which was published in November 2004.

2.4.2 Arrangement of User Needs

The User Needs are divided into ten Groups. Each Group contains User Needs that relate to similar ITS related activity and are as follows:

| | | | |
|---|------------------------|----|------------------------------|
| 1 | General | 6 | Travel Information |
| 2 | Management Activities | 7 | Traffic Management |
| 3 | Policing/Enforcing | 8 | In-vehicle Systems |
| 4 | Financial Transactions | 9 | Freight and Fleet Operations |
| 5 | Emergency Services | 10 | Public Transport |

Group 1 User Needs cover the properties expected of the Framework Architecture plus systems developed from it. They comprise: Data Exchange, Adaptability, Constraints, Continuity, Cost/Benefit, Expandability, Maintainability, Quality of Data Content, Robustness, Safety, Security, User Friendliness and Special Needs.

Each of Groups 2 to 10 is divided into “Services” which correspond to those defined by Part 1 of Issue 1 of the ISO Specification 14813. Within each service there is also a “Topic” which is a particular aspect of the “Service”.

2.4.3 Numbering System

As a result of the above the identification numbers for User Need in Groups 2 to 10 comprise 4 digits. They are defined as follows:

User Needs Number: N.M.P.Q, where:

N – User Needs Group

M - Service (based on ISO List)

P - Topics

Q - Unique number for each User Need within the Group, Service and Topic.

The identification numbers for User Needs in Group 1 do not follow this convention and use 3 digits. The second digit is used to identify each of the properties listed above.

2.4.4 User Need Description Format

Each User Need description is written in a formal style using “shall” language. A wording convention has been used which is as follows:

- (a) All systems in a Service: “The system shall provide”;
- (b) Additional features for a Service: either: “The system shall be able to”;
or: “The system shall enable”.

If more than one feature is mentioned in a User Need then they are all needed at the same time. If features are intended to be optional for ITS implementations then they are defined in separate User Needs;

The new User Needs that will be created by the work described in the document will follow this convention in the wording of their descriptions.

2.5 FRAME User Needs Mapping Methodology

2.5.1 Introduction

This section describes the methodology that has been followed to produce the mapping of the Requirements from the Cooperative Systems Integrated Projects to the FRAME User Needs. A basic underlying part of the methodology was the use of the Microsoft® Access® database tool. This was chosen because it enabled the Requirements from the Cooperative Systems Projects to be easily collated and through its “Forms” facility enabled both the mapping and the new User Needs to be created and entered. It also enabled the results from the mapping process to be presented in any required format.

2.5.2 Collation of the Requirements

The Requirements produced by each of the Co-operative Systems Projects are each presented in a different format. Those for the COOPERS Project are completely different to those for the CVIS and SAFESPOT Projects. This is because COOPERS followed the FRAME methodology for the development of its architecture. The variations in the ways that the CVIS and SAFESPOT Requirements are presented are due to the scope and quantity of additional or supplementary information that is provided. So the first step in the process was to harmonise the formats so that the Requirement Number and Description could be extracted.

2.5.3 Mapping Process

Because COOPERS has used the FRAME methodology to develop its Project ITS architecture, the mapping of its Requirements to the FRAME User Needs has already been

done. Therefore only the Requirements for the CVIS and SAFESPOT Projects have been considered.

Each Requirement from these two Projects was read and compared with the current set of FRAME User Needs to see if a “mapping” can be found. If a “mapping” was found then the User Needs number(s) were recorded using the “Forms” facility in Microsoft® Access®. Where no “mapping” to an existing FRAME User Need was found, one or more new FRAME style User Needs were created to represent the Requirement. These were also recorded using the Microsoft® Access® “Forms” facility.

All of the Requirements for the CVIS and SAFESPOT Projects have been “mapped” to the FRAME User Needs. The fact that some of the Requirements are not being implemented and trialled by either of these Projects has been ignored. This is because the FRAME User Needs show what can be implemented and can require the development and use of functionality that does not currently exist.

2.6 Presentation of the results

The results of the Requirements mapping exercise are presented in some of the Annexes to this Main Document. They are discussed in more detail in a later section of this Document.

3. CVIS

3.1 Introduction

This Chapter describes how the information that has been obtained from the documentation created by the CVIS Project has been mapped to the existing User Needs In the FRAME Architecture. The source of this information is identified together with the assumptions that have been made when it has been used. This Chapter also describes the new User Needs that have been created where no mapping has been found.

3.2 Brief Overview of CVIS

This Project comprises two types of Sub-Project (SP): Technology and Application. The list of SP's is as follows:

- Technology SP's – COMM (2.1): Communications Technologies
 - FOAM (2.2): Framework for Open Application Management
 - POMA (2.3): Positioning and Mapping
- Application SP's – CURB (3.1): Cooperative Urban Applications
 - CINT (3.2): Cooperative Inter-urban Applications
 - CF&F (3.3): Cooperative Freight and Fleet Applications
 - COMO (3.4): Cooperative Monitoring

In very simple terms, the Technology SP's are intended to provide the operating environment and services for the Application SP's. The Technology SP's are about "technology" and will therefore not be considered in this work as they are outside the scope of a High-Level Architecture such as FRAME.

3.3 Comments on the information that has been used from CVIS

The information that has been obtained from the CVIS Project comes from its "Use Cases and System Requirements" document – see reference 8(b). It provides descriptions of all the User Needs and Requirements that have been used with CVIS.

CVIS has produced a set of "User Needs" for which "Requirements" are then created. These terms are not used in the same way as in FRAME. In CVIS the "User Needs" are roughly equivalent to the "Aspirations" that would be used as the starting point for the creation of an ITS architecture using FRAME.

The "Requirements" in CVIS are equivalent to the "User Needs" in FRAME. This means that it is the CVIS Requirements that have been mapped to the FRAME User Needs. As it says in Chapter 8 of the CVIS document, "Requirements" need to have many of the properties usually associated with system requirements and system specifications, namely:

- Unambiguous - it must be absolutely clear from the description what it is that is being said. Thus, for example, whenever the word 'information' is used it must be obvious from the context what should be contained within that information, otherwise examples should be given.

- Testable - since they form the basis of WP3 [*CVIS Architecture development Work Package*], they must be written in a manner such that it is possible to check that each system requirement is represented in some manner in the architectures that will be produced by WP3.
- Traceable - it must be possible to trace the manifestation of a system requirement in the sites' [*CVIS Test Sites*] architectures.
- Singular - multiple requirements should be split into singular requirements wherever possible. This is of particular importance for optional features to ensure that they do become truly optional and, where applicable, independent of each other.
- Unique - each requirement must have a unique identifier such that it is easy to find in the full list.

This text is a direct adaptation for CVIS from the description of the “Properties of the User Needs” provided in section 4.4 of the original KAREN User Needs document – see reference 8(c). It means that the mapping to the FRAME User Needs will be made using what CVIS calls “Requirements” rather than its “User Needs”.

3.4 Collation of CVIS Requirements

When the CVIS Requirements were collected and collated for each of the Application SP's, the information in the “Use Cases and System Requirements” document – D2.2 see reference 8(b) was found to be at variance with documents and Excel files contained within their areas of the CVIS Project Portal (<https://projects.ertico.com/>). Therefore this later information from the files identified in references 8(d), 8(e), 8(f), 8(g) and 8(h) has been used in preference to the contents of D2.2.

The actual number of Requirements that have been identified for the Applications SP's from the above documentation is as follows:

- CURB (3.1) Cooperative Urban Applications: Requirements = 140
- CINT (3.2) Cooperative Inter-urban Applications: Requirements = 195
- CF&F (3.3) Cooperative Freight and Fleet Applications: Requirements = 77
- COMO (3.4) Cooperative Monitoring: Requirements = 66

Note that the tables in the WORD reference documents have been imported into Excel files to make them easier to use. These Excel files are not included as references as they are internal to the work described in this document.

The details of these Requirements will be found in Annex 1 to this document.

4. SAFESPOT

4.1 Introduction

This Chapter describes how the information that has been obtained from the documentation created by the SAFESPOT Project has been mapped to the existing User Needs In the FRAME Architecture. The source of this information is identified together with the assumptions that have been made when it has been used. This Chapter also describes the new User Needs that have been created where no mapping has been found.

4.2 Brief Overview of SAFESPOT

This Project has been divided into a number of Sub-Projects (SP's). They comprise the following:

- SP1 (SAFEPROBE – Sensors on-board the Vehicle)
- SP2 (INFRASENSE – Sensors in the Infrastructure)
- SP3 (SINTECH – Vehicular Ad hoc networks, Positioning and Local Dynamic Maps)
- SP4 (SCOVA – Safety Applications in the Vehicle)
- SP5 (COSSIB – Safety Applications in the Infrastructure)

These are the “application” SP's and they are supported by other SP's such as SP7 which provides templates, guidelines and identification of the high-level stakeholders. It is the SP's shown above that have been used as the source of the requirements to which the FRAME User Needs have been mapped.

4.3 Comments on the information that has been used from SAFESPOT

4.3.1 Introduction

The information that has been obtained from the SAFESPOT Project comes from the documentation that has been produced by each SP as a result of its Work Package 2 (WP2) activities. These are identified in references 8(i) to 8. Some of the SP's have produced Excel files containing the User Needs and Requirements that have been identified in the documents and these are included in references

4.3.2 Definition of the term “User Needs”

Like CVIS, SAFESPOT has used a definition of “User Needs” and “Requirements” that is not the same as those used by FRAME. This is highlighted by the description of “User Needs” given in section 2.2.3 of reference 8(i). It says that “User Needs” are created through the following process:

- Identify the Users (i.e. stakeholders)
- Define their expectations
- Organize these into categories to produce initial ‘List of User Needs’
- Consult to gain endorsement, make modifications and improvements
- Produce a definitive List of User Needs (this list then serves as the basis for the definition of the System Requirements).

The document goes on to say that “Requirements” are “directly derived from the User Needs; it is the logical answer to the question “What should the developed system do to cover the expressed User Needs?” or “What the future user of the system need this system to do?”.

Again the rough comparison with FRAME is that SAFESPOT “User Needs” are the equivalent of the “Aspirations” used to create an ITS architecture using FRAME and the SAFESPOT “Requirements” are the equivalent of the FRAME User Needs. Therefore it is the “Requirements” that have been used as the starting point for the mapping to FRAME.

4.3.3 Local Dynamic Map

One of the concepts that has been developed by SAFESPOT, and is also being used by CVIS is the Local Dynamic Map (LDM, or sometime just “dynamic map”). It is described in section 3.8 of reference 8(j). The LDM acts as a store for data collected by sensors connected to the Vehicle and Infrastructure Platforms and for applications to ‘extract’ the data they require making ‘queries’. Thus in the Vehicle, the LDM can act as a “firewall” between its control systems and the applications being provided by SAFESPOT (and CVIS) thereby removing any safety issues with that might arise if the SAFESPOT applications had direct access to some of the in-vehicle systems.

Despite what is written in section 3.8 of reference 8(i) there are several Requirements that use a different definition of LDM. One example is Requirement SP5_RQ41_19_v1.0, in which LDM is a digital map, as it talks about the LDM describing “the static geometry of critical points”.

When translating Requirements into FRAME User Needs, both uses of the term “LDM” have been ignored. It has been seen as a “technology” dependent term and so has been replaced by more generalised words, e.g. an interface with the vehicle control systems” or “the store of digital map data”, etc.

4.3.4 The “ego” vehicle concept

Many of the SAFESPOT Requirements refer to something called the “ego” vehicle. In very simplified terms, the “ego” vehicle is the one on which one of the SAFESPOT applications is installed. In fact it is called this as it sees the world with reference to itself and its sensors. The “ego” vehicle can send messages to neighbouring vehicles which are known as secondary actors.

Again when translating Requirements into FRAME User Needs the term “ego” vehicle has been ignored. It has been replaced by “the vehicle” or “the host vehicle”.

4.4 Collation of SAFESPOT Requirements

The SAFESPOT Requirements were collected from the Project SP Leaders and collated for SP’s 1 to 5 using the documentation in references 8(k) to 8(o). The actual number of Requirements in these SP’s that have been identified for mapping to FRAME User Needs is as follows:

- SP1: Requirements = 100
- SP2: Requirements = 49
- SP3: Requirements = 153

- SP4: Requirements = 104
- SP5: Requirements = 86

In some cases the tables in the WORD reference document have been imported into Excel files to make them easier to use. These Excel files are not included as references except where they have been provided by the SAFESPOT Project itself.

The details of these Requirements will be found in Annex 2 to this document.

5. COOPERS

5.1 Introduction

This Chapter describes how the information that has been obtained from the documentation created by the COOPERS Project has been mapped to the existing User Needs In the FRAME Architecture. The source of this information is identified together with the assumptions that have been made when it has been used. This Chapter also describes the new User Needs that have been created where no mapping has been found.

5.2 Source of information from COOPERS

The information that has been obtained from the COOPERS Project comes from its "WP3100 Report on Reference Architecture" document – see reference 8(a). It provides descriptions of all the FRAME User Needs that were mapped to its Services and the new User Needs that were written to cover the cases where no mapping was possible.

The Services for which the COOPERS Project is developing and demonstrating functionality and applications are shown in the Reference Architecture document. They are called "COOPERS services" and comprise the following:

Primary services:

- S1a/b/c: Accident/Incident/Wrong-way driver Warning
- S2: Weather Condition Warning
- S3: Roadwork Information
- S4a/b/c: Lane Utilization Information
- S5: Variable Speed Limit
- S6: Traffic Congestion Warning

Secondary services:

- S7: ISA with Infrastructure Link
- S8: International Service Handover
- S9: Road Charging to Influence Demand
- S10: Estimated Journey Time
- S11: Recommended Next Link
- S12: Map Information Check

Primary services are mainly under control of motorway operators. They will be implemented in the COOPERS Project demonstrations and address e-Safety issues directly. Secondary services address navigation and driver/management support in a more general sense and where collaboration between the infrastructure operators and other partners seems likely. The categorization of "primary" and "secondary" Services is not an indication of their relative importance and both sets have been mapped to FRAME User Needs.

A more detailed description of the Services is provided in Annex 3 to this Document. It is taken from the contents of the document in reference 8(a).

5.3 Comments on the information that has been used from COOPERS

No requirements were produced by the COOPERS Project. Instead the Services were mapped directly to the FRAME User Needs.

6. Results of the mapping to the FRAME User Needs

6.1 Introduction

This Chapter describes the results of the work that has been done to map the Requirements from the CVIS and SAFESPOT Projects plus the Services from the COOPERS Project to the FRAME User Needs.

6.2 New FRAME User Needs

6.2.1 Introduction

Where no mapping could be made between the Requirement or Services and the existing FRAME User Needs, new FRAME User Needs have been created. They are shown in Annex 5 to this document. For each project and sub-project the numbers of new FRAME User Needs are shown in Table 1.

Table 1 Numbers of new FRAME User Needs for each Project and Sub-project

| Project Name | Sub-Project Name | Numbers of new FRAME User Needs |
|--------------|------------------|---------------------------------|
| COOPERS | | 38 |
| CVIS | CURB (3.1) | 140 |
| | CINT (3.2) | 221 |
| | CF&F (3.3) | 71 |
| | COMO (3.4) | 16 |
| SAFESPOT | SP1 (SAFEPROBE): | 119 |
| | SP2 (INFRASENSE) | 10 |
| | SP3 (SINTECH) | 157 |
| | SP4 (SCOVA) | 170 |
| | SP5 (COSSIB) | 100 |

The above numbers do take account of multiple use of the same new FRAME User Need within each sub-project. However they do not take account of the multiple use of the same new User Need between different projects. So the total of the above numbers will over-state the actual number of new FRAME User Needs across all of the projects. Taking into account the multiple uses of new FRAME User Needs across projects, the total number is **768**.

The numbers of new FRAME User Needs created for each sub-project and the total should be compared with a total number of 550 FRAME User Needs in the current list available from the FRAME web-site. The User Needs in this list are those that were originally identified by the KAREN and FRAME Projects.

6.2.2 Allocation of new FRAME User Needs within the existing structure

The style and format of the new FRAME User Needs follow those for those that already exist – see the list in Annex 4 to the Main Document. They have been assigned new numbers so

that they fit into the most appropriate Group, Service or Topic of the existing FRAME User Needs. Where this was not possible, new Groups, Services and Topics have been created within the existing FRAME User Needs structure. Each new FRAME User Need is unique and there are no duplications between the projects and sub-projects.

6.2.3 Consolidation of new FRAME User Needs

Only limited attempts have been made to consolidate the contents of the new FRAME User Needs to avoid duplication of their requirements. Thus there may be some new User Needs with different numbers that have some degree of similarity between the descriptions of their requirements. Sometimes it may be just that the same requirements are expressed in different ways, but there may be other occurrences where there are some slight differences in the actual details of the requirements. One obvious consequence of this is to increase the actual number of new User Needs that have been created leading to an increase in the total number of FRAME User Needs. However it should not affect their use or the content of any new functionality that is created to fulfil them. If any consolidation is needed it is likely to be carried out by the E-FRAME project after the completion of the work described in this document.

6.2.4 Particular issues in the content of the new FRAME User Needs

In some of the new FRAME User Needs reference is made to the “host vehicle”. Where this is used it is intended to make the point that the functionality required to support the User Need can only sensibly be located in the vehicle, as opposed to the roadside or some other location. At first sight this may appear to be a constraint, however if the term “host vehicle” is not included in the User Need it allows the possibility for the functionality to be located anywhere. Thus for example, if the User Need says that vehicle speed must be measured continuously, it would seem sensible to require this to be done in the vehicle, rather than at the roadside, with all the attendant complications of having to continuously track the vehicle by some means so that its speed can be measured instantaneously and then have to transmit that information to the vehicle before it can be displayed to the Driver.

6.3 Mapping to existing FRAME User Needs

For some Requirement and Services in the projects it was possible to make a mapping between them and one or more of the existing FRAME User Needs. These mapped FRAME User Needs are shown in Annex 6 to this Document. For each project and sub-project the numbers of mapped FRAME User Needs that have been identified are shown in Table 2.

Table 2 Numbers of mapped FRAME User Needs for each Project and Sub-project

| Project Name | Sub-Project Name | Numbers of mapped FRAME User Needs |
|--------------|------------------|------------------------------------|
| COOPERS | | 185 |
| CVIS | CURB (3.1) | 34 |
| | CINT (3.2) | 109 |
| | CF&F (3.3) | 6 |
| | COMO (3.4) | 13 |

| Project Name | Sub-Project Name | Numbers of mapped FRAME User Needs |
|---------------------|-------------------------|---|
| SAFESPOT | SP1 (SAFEPROBE): | 0 |
| | SP2 (INFRASENSE) | 73 |
| | SP3 (SINTECH) | 27 |
| | SP4 (SCOVA) | 2 |
| | SP5 (COSSIB) | 15 |

There are duplications between the FRAME User Needs that have been mapped to each of the projects and sub-projects, i.e. the same User Need can be mapped to more than one project, or sub-project.

7. Conclusions

Although a large number of the existing FRAME User Needs have been mapped to the Co-operative Systems Project Requirements, there are also a substantial number of new User Needs. Some form of “search tool” needs to be developed to aid users in the search for the FRAME User Needs that they want to use.

8. References

The following is a list of references used in this document;

- (a) COOPERS, “WP3100 Report on Reference Architecture”, Version 1, dated 9 February 2007
- (b) CVIS. “Use Cases and System Requirements” document, D.CVIS.2.2, Version1, dated 30 November 2006.
- (c) KAREN. “European ITS Framework Architecture List of European ITS User Needs”, D2.02, Issue 1, dated August 2000. This document can be downloaded from the “LIBRARY” page of the FRAME Web Site at: <http://www.frame-online.net/home.htm>.
- (d) CVIS, CFF CV-UN-RQ-SP3.3-01xx Dangerous Goods_4260567.xls, Version 1.2, dated 9 November 2006
- (e) CVIS, CFF CV-UN-RQ-SP3.3-02xx Parking Zones_4260568.xls, Version 1.2, dated 26 November 2006
- (f) CVIS, CFF CV-UN-RQ-SP3.3-03xx Access Control_4260570.xls, Version 1.1, dated 9 November 2006
- (g) CVIS, CINT DEL_CINT_2.1_Use_cases_and_system_requirements_v2.0.pdf V0.1, Version 2, dated 21 September 2006
- (h) CVIS, UNRQ_CURB_v2_8_5358549.xls, dated 11 September 2006
- (i) SAFESPOT, D7.2.1 Core Architecture Requirements, Version 2.2, dated 29 October 2006
- (j) SAFESPOT, D7.2.3 Architecture Building Guide, Version 0.7, dated 19 October 2007
- (k) SAFESPOT (SP1), Annex to D1.2.3 - Final.xls – a supplement to the Deliverable D1.2.3 Requirements, Version 1, dated 26 January 2007
- (l) SAFESPOT (SP2), complete table from section 3.6 in SF_D2.2.2_Part a_Final Report_Needs&Requ_v7.0.doc
- (m) SAFESPOT (SP3), SP3 requirements table.doc, which is the requirements table from D 3.2.2 User Needs and Requirements.doc, Version 1.0, dated 19 February 2007
- (n) SAFESPOT (SP4), the “All REQ” sheet from User needs and Requirements Compilation V2.3.xls, which is an Excel file containing the tables from SF_D4.2.4_User Needs and Requirements V1.2.doc, dated 19 February 2007
- (o) SAFESPOT (SP5), SF_D5.2.3_Application Scenarios and Requirements_v2.0.doc, dated 14 March 2007