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**Abstract:** This document describes the material used and an overview of discussions at the TRIDENT User Forum meeting held in Leeds, UK on 10 April 2000.

**Keyword list:** TRIDENT, User Needs, User Forum, Workshop, Questionnaire, System Requirements.

# **TRIDENT**

## **Results of the User Forum**

**Final Version (2.0)**

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\* This is either: Restricted (to the programme, to the activity partners) or for Public usage.

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# 1 Introduction

## 1.1 TRIDENT

TRIDENT is focusing on the exchange and sharing of multimodal travel information: most of the current developments are specific to one transport mode.

A major output of the project will be the preparation of specifications for systems architectures in the multimodal travel domain. As for past experiences in single mode developments the project expectation is to favour and/or accelerate the development of telematics networks and, in doing so, to enable a more rapid diffusion of ITS services.

To achieve these goals TRIDENT has to:

1. Develop a clear strategy concerning the use and integration of existing or developing “tools” for data exchange (dictionaries, location referencing methods, protocols, specifications).
2. Analyse the opportunities offered (and the challenges generated) by new technologies in the field of ITS.
3. Test “in the field” the validity of the specifications.

To achieve these goals TRIDENT is drawing on the experience and expertise of numerous organisations both through active participation in the TRIDENT consortium and through a broader user needs analysis. T

Workpackage 2 of TRIDENT - User Needs and Communication Scenarios - addresses this user needs analysis in the context of multimodal travel information and data exchange.

To encourage the widest possible participation, and to gain consensus on proposed TRIDENT solutions, a “Forum” has been established that is open to all interested organisations. The first occasion for the TRIDENT Forum Members to meet was at the User Needs Forum in Leeds.

## 1.2 Scope of this document

The scope of this document is to present the material used at the TRIDENT User Forum meeting held at the West Yorkshire Playhouse, Leeds, U.K. on 10 April 2000. An overview of the focus of the discussion sessions is also provided.

This User Forum was a part of Workpackage 2 – User Needs and Communication Scenarios.

## 2 TRIDENT User Forum

### 2.1 Purpose

Workpackage 2 of TRIDENT - User Needs and Communication Scenarios - focuses on the User Requirements to be addressed by the TRIDENT specifications, to developed in Workpackage 3, trialed in Workpackage 4 and evaluated in Workpackage 5.

The approach used in assessing user requirements within TRIDENT has been manifold. This has included desk studies of existing user needs studies and reports from earlier European Commission funded Research and Development projects, identifying user requirements from the experience of members of the TRIDENT consortium, user needs questionnaires and open discussion at the User Forum.

The specific purpose of the User Forum, held on 10 April, was to present the concepts behind TRIDENT, present the initial findings from the user needs analysis, permit attending organisations to express their user requirements and opinions, and validate the approach that is being adopted by TRIDENT.

In addition to the presentations and audio-visual material available, several documents were available to attendees:

- Deliverable 2.1<sup>1</sup> describes the technical options involved with the TRIDENT project. Both existing and new technologies are explored, and particular attention is paid in evaluating the advantages and disadvantages of employing each technology in a network of operators wanting to share travel information.
- A draft version of Deliverable 2.3<sup>2</sup>, which examines non-technical obstacles to the sharing and exchange of travel data, with recommendations for solutions. Various non-technical obstacles are investigated and where possible recommendations on how these can be overcome are presented.
- TRIDENT User Needs/ System Requirements<sup>3</sup>, a working document which presents some initial thoughts on the scope of user requirements and how these can be translated into system requirements and functions.

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<sup>1</sup> TRIDENT Deliverable 2.1 - Characteristics and benefits of state of the art data sharing and exchange technologies, March 2000.

<sup>2</sup> TRIDENT Deliverable 2.3 (DRAFT) - Draft recommendations to overcome non-technical obstacles, version 3, April 2000. The final version of this Deliverable should be available at the end of April 2000.

<sup>3</sup> TRIDENT, User Needs / System Requirements - Working Document - April 2000.

## 2.2 Agenda

### Workshop – Defining TRIDENT services?

#### Morning session - 10:00 - 12:30

Welcome

(Councillor Graham Phelps, Vice Chairman West Yorkshire PTA)

(John Carr, METRO)

10:00 - 10:20

Exchanging Information

(Peter Van der Perre, ERTICO)

10:20 - 10:50

Relationship with UK's UTMC Programme

(Mark Cartwright)

10:50 – 11:00

*Coffee Break*

11:00 - 11:30

What is TRIDENT?

(Alfredo Bolelli, Mizar)

11:30 - 11:50

Discussion Session

11:50 - 12:30

#### Afternoon session - 14:00 - 16:00

User Needs Analysis - Approach & Initial Results

(Jonathan Booth, MVA)

14:00 - 14:45

*Coffee Break*

14:45 - 15:00

Discussion Session

15:00 - 15:50

Summary

(John Carr, METRO)

15:50 - 16:00

Close

16:00

## 2.3 Attendees

<b>Organisation</b>	<b>Person</b>
West Yorkshire Passenger Transport	Mr James Bennett
Mizar Automazione S.p.A.	Mr Alfredo Bolleli
MVA limited	Mr Jonathan Booth
West Yorkshire Passenger Transport	Mr John Carr
Curtis+Cartwright Consulting Limited	Mr Mark Cartwright
Highways Agency	Mr Rex Dowelman
Heusch Boesefeldt	Mr Jorg Dubbert
University of Southampton	Mr G.P. Fingerle
Strathclyde Passenger Transport Executive	Mr Chris Fisher
Department of the Environment, Transport and the Regions (DETR)	Mr Christopher Gibbard
DETR	Mr Neil Grant
Henderson Travel	Mr John Henderson
Cap Gemini	Mr David Henig
BBC	Mr Timothy Hilgenberg
Centre d'Etudes Techniques de l'Equipement (CETE)	Mr Michel Liger
B+S Ingenieur AG	Mr Franco Marino
European Broadcasting Union	Mr Bev Marks
Societa Transporti Automobilistici S.p.A.	Mr Roberto Nenzi
RATP	Mrs Chantal Saint-Hilaire
BIS	Mr Bernhard Schmidt
West Yorkshire Passenger Transport	Mr Martin Siczkowski
Buckinghamshire County Council	Mr Roger Slevin
Railtrack	Ms Helen Smith
Logan	Mr Bill Stewart
Northumberland County Council	Mr Peter Stoner
First Group	Mr Bob Tebb
Transport Infrastructure & Telematics NV (TRITEL)	Mr Rudi Tegenbos
MVA Limited	Mr Jonathan Thomas
ERTICO	Mr Peter Van der Perre
Transport Infrastructure & Telematics NV (TRITEL)	Mrs Katia van Hemelrijck

## 2.4 Overview of Discussion Sessions

Within the structure of the agenda two short discussion sessions were included to enable attendees to express their opinions on the focus of TRIDENT, to provide input on their user needs for the TRIDENT specifications, and to raise issues and questions within the TRIDENT Forum.

This section aims to provide an overview of the nature of the discussion that took place, rather than provide a verbatim record of each contribution. However, it is hoped that this summary provides a true representation in context of the nature of discussion.

The first discussion session, at the end of the morning agenda, followed a series of presentations outlining the needs that TRIDENT aim to address and an overview of the work to be performed in TRIDENT and likely approaches.

### The Users of TRIDENT

In the first discussion session several attendees asked questions of clarification relating to these presentations, in particular focusing on who are the intended users of TRIDENT technologies and the types of data and services to be supported by TRIDENT. Project partners provided clarification stating that the intended users of TRIDENT were professional organisations in the travel information field who wished to exchange information. Clearly the specific needs of these organisations are to some degree driven by the demand for information and services by their users, the travelling public. However these professional organisations may also have data exchange and sharing requirements that do not relate directly to end-user needs, such as in the case of the exchange of operational data or the exchange of all data associated with public transport timetables.

### Focus of the Types of Data to be Exchanged in TRIDENT

On the issue of the types of data and services to be supported within the TRIDENT development work there was a range of opinion expressed by attendees. Mr. Gibbard (DETR, U.K.) stated that many initiatives are currently on-going nationally to support the exchange of static public transport timetables. The most significant of these is TransXChange, which aims to enable the electronic exchange of bus timetable and service information from bus operators to the local authorities and traffic commissioners. Mr Gibbard stated that this was addressing an immediate need, but that the longer-term vision was more adventurous. The current PTI2000 initiative aims by the summer of 2000 to provide a single national telephone number to access static national public transport information. To facilitate this systems must be put in place to enable queries for long distance journey planning, and to this end a technical solution, JourneyWeb, has been proposed.

However, in the longer term, the vision for PTI2005 is to extend these existing approaches to provide real-time travel and routing information. To this end Mr. Gibbard urged TRIDENT to focus on the exchange of real-time travel information rather than static information. This position was supported by a number of attendees.

Alfredo Bolleli (Mizar) speaking on behalf of TRIDENT expressed that the six TRIDENT test sites wish to trial a range of data exchanges types, encompassing a range of data content types, with differing temporal applicability (static, semi-static and dynamic information). TRIDENT wishes to build from the basis of existing solutions and therefore the approaches used in various projects and initiatives will be examined including JourneyWeb. Mr. Henig,

(Cap Gemini) stated that the TransXChange specification development work had an ambitious programme, which will result in prototypes being available later this year. From the TRIDENT perspective, it is hoped to be able to build on such work, if it is compatible with the TRIDENT goals, to reduce redundancy and duplication of effort. Therefore, if solutions to the exchange of static data, such as public transport timetables, exist TRIDENT will try to incorporate it in its specifications.

From the initial results of the TRIDENT user needs questionnaire it is apparent that organisations approached are less ambitious in their aspirations for the TRIDENT specifications, with most aiming to be able to exchange static information electronically, with only a limited number of organisations wishing to exchange dynamic (real-time) information.

### **Using TRIDENT to Support End-User Focused Services**

A further perspective was introduced by representatives of the broadcast industry. Mr. Hilgenberg (BBC) and Mr. Marks (European Broadcasting Union) urged participants to focus on exchanging information that supports services required by the end-users. In their experience, the travelling public's largest demand is for information and advice following a disruption on the travel network. The ability to provide static public transport timetables was not seen as such an attractive service.

Mr. Booth for TRIDENT stated that this was an interesting contribution but that TRIDENT was attempting to develop a generic solution that would permit the exchange of a range of static and dynamic data. The primary aim of TRIDENT is to ensure that the data exchanged is logically structured, properly defined and generic in nature. In principle, all forms of service should be capable of being supported by TRIDENT data exchange.

However, it was stressed that TRIDENT addresses the exchange of information between professional organisations and will not work on services that are provided to the ultimate end-user, the travelling public.

### **Likely Technological Choices and Their Impact**

Other attendees raised the issue of which technologies were likely to be used, and how would TRIDENT ensure that its choice would not develop around a technology with a limited lifespan. From previous experience, there is considerable danger in associating technical specifications with an underlying vision of the technology or technologies to be employed. Technology is rapidly developing and to ensure that TRIDENT has a long-term impact it is necessary to make it as technology-independent as possible. To this end TRIDENT has to take in account the limitations and requirements of current technologies, but must strongly limit the customisation to a specific technology. Mr. Marks affirmed this approach, stating that the TPEG protocol work being undertaken by the EBU had adopted a similar approach.

Mr. Booth asked the attendees whether they had strong views on the types of technologies that TRIDENT should use. No strong opinion was expressed.

### **The Granularity of Data to be Exchanged**

Relating to the types of services that TRIDENT data exchange would try to support, a further issue, introduced by Mr. Hilgenberg. He stated that the nature of information provided through TRIDENT exchanges must be well suited to the intended target end-user audience. Thus, there was little use in providing individualised travel information if, for instance, a

major event was occurring on a motorway. This can be termed the “granularity” of the information. Other attendees disagreed, stating that TRIDENT should be capable of supporting individualised services if that was what was demanded, although in general this was unlikely to be the case.

### **Location referencing**

In the afternoon presentation on TRIDENT Mr. Booth presented user needs that have been identified within Workpackage 2 of TRIDENT to date. In particular a wide range of opinions concerning location referencing systems and their use had been expressed. As information to the attendees, at the start of the second discussion session, Mr. Slevin (Buckinghamshire County Council) was asked to comment on the proposed national gazetteer in the U.K., which is aimed at supporting the PTI2000 initiative.

He described in detail the process to be undertaken and the underlying concepts behind how the national gazetteer would support PTI2000 for long distance journeys. Local journeys would have to seek alternative location referencing methods. An interesting discussion followed on whether this type of approach could be extended in detail to support local journeys, but also in the context of TRIDENT, if this approach would be suitable for providing coherent geographically referenced information from a number of different transport modes. Road transport telematics used gazetteers to a lesser extent than in public transport and systems to support navigational devices and self-geo-referencing information systems would be required.

## **2.5 Next steps**

The issues covered in these discussion sessions will be used as input into the definition of user needs for the TRIDENT specifications. The Final report on TRIDENT User Needs (deliverable number 2.5) will be available by the end of June, 2000 which will be distributed to all TRIDENT Forum Members. Work will then progress in translating the user needs into draft common specifications.

A second TRIDENT Forum workshop is scheduled to take place in November 2000, to coincide with the ITS World Congress in Turin. This workshop will focus on the use of new technologies, to help validate the proposed specifications to support an object-oriented approach.

### 3 Audio-Visual Material Used

The audio-visual presentation material used by speakers at the TRIDENT User Forum is provided in the following section. The presentation material used were:

- Welcome and agenda
- Exchanging Information
- Relationship with UK's UTMC Programme
- What is TRIDENT?
- User Needs Analysis - Approach & Initial Results
- TRIDENT User Needs/System Requirements

Electronic copies of the above presentations are available on the TRIDENT Project website, under the Forum section:

<http://www.ertico.com/links/trident.htm>