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Abstract:

This document reports all the dissemination and standardization activities realized during the third six months of the MONET project, from the 1st January 2011 to the 30th June 2011.

Dissemination activities include the realization and the update of the project's website, the participation at international conferences, the publication in conferences, journals and books, the distribution of brochures and leaflets, and the organization of workshops.

Standardization activities are focused on the interaction, in terms of monitoring and contribution providing, with standardization bodies for which the work proposed in MONET is relevant.

¹ Nature of deliverable: **R** = Report; **P** = Prototype; **D** = Demonstrator; **O** = Other

² Dissemination level: **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).

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Executive Summary

This document reports all the dissemination and standardisation activities realized during the third 6 months of the MONET project, from the 1st January 2011 to the 30th June 2011.

This document includes:

- A dissemination plan.
- A description of MONET Logo and Website, including the updates carried out during the period of interest, illustrating its features and changes.
- A report on the participation to conferences and other dissemination events.
- A report on the publications of research papers in conferences and journals.
- Standardisation plan and activities carried out up to the 30th June 2011, also in terms of standards modification and comparisons.
- The list of experts contacted and currently member of MONET User Advisory Board.



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List of Acronyms

Acronym	Meaning
ACM	Association for Computing Machinery
AENA	Aeropuertos Españoles y Navegación Aérea
AIAA	American Institute of Aeronautics and Astronautics
ANBP	Associação Nacional de Bombeiros Profissionais
BSM	Broadband Satellite Multimedia
CELAR	Centre d'électronique de l'armement
DYMO	Dynamic MANET On-demand Routing
DVB-RCS	Digital Video Broadcasting - Return Channel Satellite
EC	European Commission
EDA	European Defence Agency
ESA	European Space Agency
ETSI	European Telecommunications Standards Institute
FP7	Framework Programme Seven
IEEE	Institute of Electrical and Electronic Engineers
IET	Institution of Engineering and Technology
IETF	The Internet Engineering Task Force
IFAC	International Federation of Automatic Control
ISI	Integrated Satellite Initiative
ITU-T	International Telecommunication Union – Telecommunication Standardization Bureau
MANET	Mobile Ad-hoc Networks
MESA	Mobility for Emergency and Safety Applications
MONET	Mechanisms for Optimization of hybrid ad-hoc networks and satellite NETWORKS
MSS	Multimedia Satellite Subsystems
NDHP	MANET Neighbourhood Discovery Protocol
OLSR	Optimized Link State Routing
PSC	Public Safety Communication forum
PSCE	Public Safety Communication Europe forum
QoE	Quality of Experience
QoS	Quality of Service
RFC	Request For Contribution
SAMUR	Servicio de Asistencia Municipal de Urgencia y Rescate
SIAM	Society for Industrial and Applied Mathematics
UME	Spanish Military Unit

Table 1 – List of acronyms.

1 Introduction

This document corresponds to the third report on the dissemination and standardisation activities conducted in the context of the MONET project. This report covers the period of the project starting from the 1st January 2011 to the 30th June 2011, in the context of WP8.

MONET is an FP7 European project centred on hybrid MANET-Satellite networks. Such a typology of network is a natural evolution of considering the problem of providing local and remote connectivity in a highly mobile, dynamic and often remote environment. MONET will study the challenges of such composite networks with particular focus on the following:

- Optimising network resources and link availability;
- Providing Quality of Service (QoS) and Quality of Experience (QoE);
- Minimizing costs and energy.

In the context of the MONET workplan, work package WP8 includes all the activities that aim to provide external visibility to MONET project results, including scientific, technical, commercial and industrial points of view, as well as standardization. Exploitation activities are also part of WP8.

This document is organized in the following way: Section 2 summarizes the structure and the different activities planned for WP8. Section 3 introduces a dissemination plan that should be developed during the duration of the project. Section 4 reports the updates carried out on the MONET web site during the period of interest. Section 5 addresses the organization of workshops, seminars and the participation to conferences and other dissemination events. Section 6 discusses publications of research papers in international conferences and journals. Section 7 reports standardisation activities related to MONET project developed up to the 1st June 2011. Section 8 lists the experts contacted and member of MONET User Advisory Board. Finally, a conclusion section ends this report.

2 WP8 Structure

WP8 – Dissemination, Exploitation and Standards aims at:

- Ensuring an efficient dissemination of the project objectives and results to the stakeholders that are considered critical to the project: stakeholders are the project partners but also the target audiences outside the project; e.g., emergency services, public safety authorities, communities, municipalities, satellite operators and devices/terminals manufacturers.
- Define an exploitation strategy for the project and pursue exploitation activities (e.g. business case, productization, etc.).
- Interface with standardization groups.

Work Package 8 is split into three tasks: Task 8.1, Task 8.2 and Task 8.3.

Regarding Task 8.1, the following activities are planned:

- Development of a dissemination strategy to stimulate project awareness among market and stakeholders.



- Exchange of information with end-users and other projects and initiatives (including EU projects).
- Creation of a website: build, maintain and update a Web Platform, to store and access the knowledge on the project in a user friendly and easily accessible way.
- Publication of the results (electronic based and paper-based dissemination) – Prepare promotional literature to support the marketing strategy, including a project leaflet, articles, newsletters, conference papers, etc.
- Participation in conferences, seminars and workshops.

Task 8.2 is dedicated to activities that target the exploitation of project results and future business opportunities for the partners. The related activities include the development of a business case for MONET, the management of project and partners IPR, a focused and targeted dissemination of the project to specific end-users and potential customers, the development of a product development / research roadmap and the establishment of a plan for using and disseminating the foreground knowledge gained by the project.

Task 8.3 is responsible for the monitoring of the project's activities concerning their relation and potential compliance with existing standards or on-going work in standards. The following activities are foreseen:

- Interact with relevant standardisation groups;
- Provide inputs to them and monitor the project work to ensure we follow the same directions.

3 Dissemination Plan

This section introduces the dissemination plan of MONET project, describing the general actions and strategies to be undertaken in order to ensure an efficient dissemination of project results.

The MONET dissemination policy will be naturally oriented towards the natural end-users of the project results (i.e. public administrations in rural regions, public safety and emergency relief authorities as well as companies with field workforces in isolated areas). These include fire services, forest services, civil protection, humanitarian relief organisations, local municipalities, quarrying companies, building companies and of course the civil and political authorities responsible for decision making. Other groups will also be considered and targeted. These include communication equipment developers and potential partners and customers (e.g. governments, telecommunications operators and wireless providers).

A MONET website, already developed, will be used to boost information flow between all entities with an interest in the project: the Commission, industrial companies, universities, technological centres, standardization bodies, etc. It will also be used to disseminate relevant information to targeted parties, including policy makers. A detailed description is available in D8.1 M6 deliverable at Section 4.2. In this document some updates activities on the web site are reported, in Section 4.

A set of publicity activities (as the realization of MONET logo, brochure, leaflets, other MONET branded materials) have been carried out in order to aid and promote instant public

recognition. The results of these activities are reported in D8.1 M6 MONET deliverable, in particular in Section 4.1 and Section 6. Other dissemination activities foreseen include:

- Presentations at different events targeted to relevant interested parties, for example:
 - AIAA International Communication Satellite Systems Conference and Exhibit;
 - The European PSC (Public Safety Communication) Forum;
 - FP7 ICT Infodays (at European and national levels);
 - International conference on Wireless Networks - ICWN (Worldcomp – every year);
 - Conferences on communications (e.g. IEEE international conference on communications, IEEE Globecom, IEEE Infocom, FP7 ICT Mobile & Communication Summit);
 - Conferences on optimization and control-theory (e.g., IEEE Conference on Decision and Control, IEEE Conference on Control Applications, IFAC World congress, ...);
 - Ad-hoc – NOW (conference held every year);
 - ISI European Technology Platform organized events;
- Presentations and meetings with advisory board candidates or members;
- Writing articles, publications to scientific communications, and optimization and control journals and magazines such as Elsevier's Ad-hoc Networks International Journal, Elsevier's Computer Communications Journal, International Journal of Parallel, emergent and Distributed Systems, Wiley's International Journal of Satellite Communications and Networking, Springer's Journal Mobile Networks and Applications, IEEE/ACM Transactions on Networking, IEEE Transactions on Wireless Communications, IEEE Communications Magazine, IEEE Wireless communications magazine, IET Communications, IEEE Transactions on Communications, IEEE Journal on Selected Areas on Communications (JSAC), IEEE Transaction on Automatic Control, International journals of satellite communications and networks, Computer Networks (Elsevier), Automatica (Elsevier), Control Engineering Practice (Elsevier), SIAM Journal on Optimization, SIAM Journal on Control and Optimization, European Journal of Control (Lavoisier), and the International Journal of Control (Taylor & Francis).

Section 5 illustrates the conferences/workshops/seminars organized and attended to disseminate project concept (the complete list of major and other dissemination activities) and results and Section 6 shows publications related to MONET that have been carried out during the period of interest.

Finally, MONET will also disseminate knowledge directly to the relevant European Technology Platforms, contributing to updates in their strategic research agendas (ISI and e-Mobility). These activities will be instrumental in increasing the awareness of opportunities and advantages raised by MONET (both its use and research).

4 MONET Website updates

The MONET website, through which general information on MONET is made available, plays a major role in the dissemination of the project activities and results. It has been realized as a Google site and is available both at the url: <http://www.ict-monet.eu> and at the url <http://sites.google.com/a/tekever.com/monet/>. The website of MONET has been launched in May of 2010, and its homepage is reported here in the following figure.

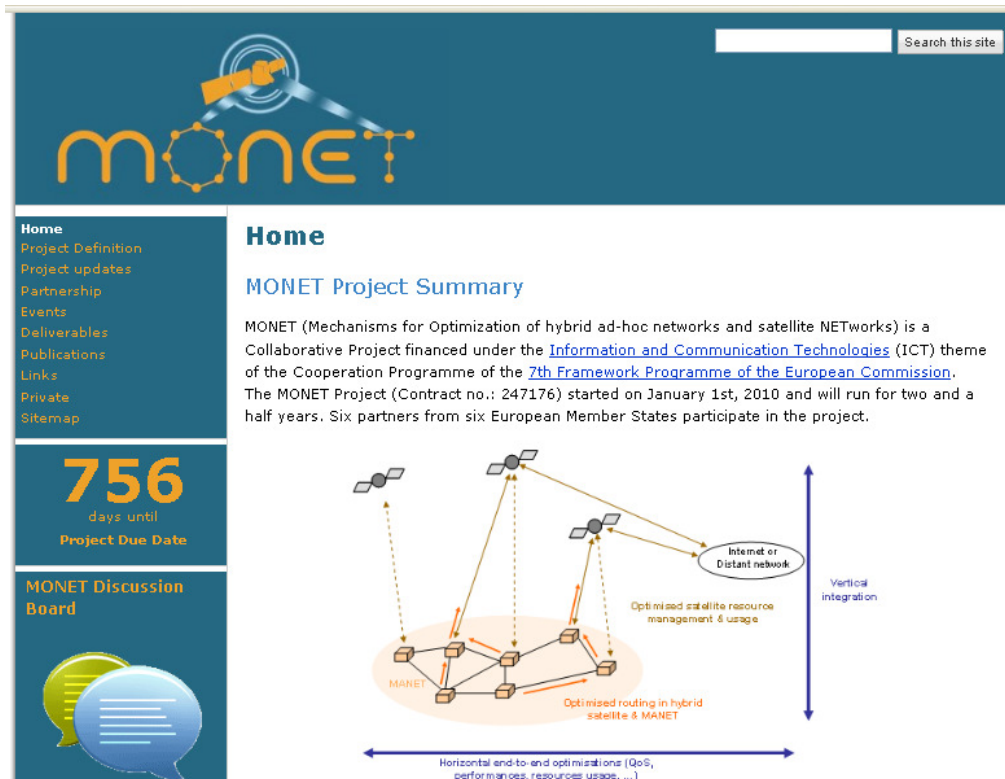


Figure 1 – MONET website homepage.

The website, as reported with detail in D8.1 M6 MONET deliverable, includes the following sections, as it is visible in the list situated in the right side of the homepage. Hereafter some updates to the first version of the web site are also reported:

- **Home:** section reporting MONET Project Summary providing the main concept and general information about the project.
- **Project Definition:** section illustrating the objectives and the expected results of the project. It reports the Work Breakdown Structure (WBS) of MONET as well.
- **Project Updates:** section containing the latest news about the MONET project and related issues (e.g. events, main results, ...).
- **Partnership:** section with detailed information on each partner of the MONET consortium (brief description and fields of interest, contacts and links to official member homepages).
- **Events:** section containing the list all the MONET related events, such as scheduled events related to MONET and events which MONET partners will attend and/or organize (basically meetings open to public, or dissemination events). This section

has been updated during the period covered by this deliverable (from 1st January of 2011 to 30th June of 2011) by adding the complete list of carried out dissemination activities. Such a section is constantly kept up to date. The following figure shows the Events page:

Events

Below you will find a list of all the most relevant events pertinent to MONET project. Such a list contains:

- Scheduled events related to MONET, and
- Events where MONET partners will be present (basically meetings open to public, e.g. public workshop, or dissemination events where we will be present).

<i>Date and Location</i>	<i>MONET partners</i>	<i>Event Name</i>	<i>Main Participants</i>	<i>Objective</i>	<i>Results for MONET</i>
9th September 2009, Madrid, Spain	ISDEFE	Crisis Management and Emergencies	Spanish Ministry of Interior General Directorate of Emergencies and Civil Protection.	Dissemination activity of MONET scope and usefulness; obtain their support to collect end-user requirements.	The involvement achieved from them for MONET project is as observers.
7th-8th April 2010, Toulouse, France	ASTRIUM, ISDEFE, CRAT, UNIS	ISI General Assembly	ISI members and EC/ESA representatives.	ISI General Assembly + New organisation of working groups + ISI key roles elections.	Introduction to MONET project carried out during the Security working group discussion.
12th April 2010, Fire Brigade Office in Madrid, Spain	ISDEFE	Dissemination activities towards Madrid City Police	Members of ICT Communication Department of Madrid Police.	Explaining MONET concept and obtaining their support as potential end users.	The involvement achieved from them for MONET project is as observers.
14th-16th April 2010, Portoroz, Slovenia	URSZR	17th Days of Slovene Informatics, URSZR, ,	Slovene IT representatives.	Presentation of the MONET concept.	MONET concept presented to the Slovene IT (research, public

Figure 2 – Major dissemination activities on the MONET web site

The complete list of dissemination activities has been divided into two sections: the first one (shown in Figure 2) contains the list of major dissemination activities, the second one includes other dissemination activities, such as presentation of papers to international conferences and personal interview to experts of the sector. Such a second list is shown in Figure 3:

[Events >](#)

Other Events

This page reports a list of other events, such as presentation of papers to International Conferences and personal interviews to expert of the sector:

Date and Location	MONET partners	Event Name	Main Participants	Objective	Results for MONET
17th February, 2009, UME Head Quarter, Madrid, Spain	ISDEFE	Personal interviews with Spanish Military Unit (UME) for Emergencies	UME members.	Presentation of MONET in order to involve them first during MONET proposal submission phase and after during the beginning of the project phase to collect their impressions and view about the objectives planned.	The involvement achieved from them for MONET project is as observers.
17th March 2010, UME Head Quarter, Madrid, Spain.	ISDEFE	Personal interviews with Spanish Civil Guard (Communications Department)	UME members.	To obtain from them their ideas and suggestions about MONET functional and operational requirements. One of the missions of Civil Guard is to deal with Spanish Borders Surveillance, and our interest where to involve them to define the Border Control Scenario.	The involvement achieved from them for MONET project is as observers.
12th April 2010, Fire Brigade Office, Madrid, Spain.	ISDEFE	Personal interviews with Madrid Fire Brigade	Head of Unit of Madrid Fire Brigade.	Double finality: a) explaining to them more in detail technical aspects of the project; b) collect valuable information for the definition of Forest Fire	They provide crucial end user requirements included in MONET reports (weight of nodes, necessity of relay nodes, number

Figure 3 – Other dissemination activities on the MONET web site

- **Deliverables:** section reporting the list of all MONET public deliverables.
- **Publications:** section containing the list of MONET publications (e.g. white papers, papers, presentations). Such a section has been updated with the new publications reported in Section 6.

Publications

Conference and workshop papers

This section lists all the paper published to conferences and workshop within the context of MONET project.

Title of the paper	Author(s)	Event	Location	Date	
On Optimizing Hybrid Ad-hoc and Satellite Networks - the MONET Approach	A. Oliveira, Z. Sun, M. Monier, P. Boutry, D. Gimenez, A. Pietrabissa, K. B. Juros	Future Network & Mobile Summit 2010	Florence, Italy	16-18 June 2010	Details
MDP Call Control in Variable Capacity Communication Networks	A. Pietrabissa, F. Delli Priscoli	18th Mediterranean Conference on Control and Automation	Marrakech, Morocco	23-25 June 2010	Details
Reinforcement Learning Call Control in Variable Capacity Links	A. Pietrabissa	18th Mediterranean Conference on Control and Automation	Marrakech, Morocco	23-25 June 2010	Details

Conference papers

Title of the paper	On Optimizing Hybrid Ad-hoc and Satellite Networks – the MONET Approach
Author(s)	A. Oliveira, Z. Sun, M. Monier, P. Boutry, D. Gimenez, A. Pietrabissa, K. B. Juros
Location	Florence, Italy
Date	16-18 June 2010
Link to event page	Future Network & Mobile Summit 2010
Abstract	The potential of Mobile wireless Ad hoc Networks (MANET) is significantly high. However, MANET applications often happen in infrastructure-less or remote regions where remote connectivity to the outside world has to be provided by some other means. Satellite is one of the solutions to provide this and sometimes the only solution. Current expectations dictate that satellite will be seen not only as a component of an alternative routing path but also as part of a unique (really integrated) system. The concept of a hybrid MANET-Satellite network is therefore a natural evolution of considering the problem of providing local and remote connectivity in a highly mobile, dynamic and often remote environment. These composite networks raise significant challenges such as: optimising network resources and link availability; providing Quality of Service (QoS) and Quality of Experience (QoE); minimizing costs and energy. The EC FP7 project MONET will address precisely these issues by considering the end-to-end optimization of resource management in a hybrid network, taking into account its impact on both the MANET and satellite segments.
Download paper	See the attachments below.

Attachments (1)


 On Optimizing Hybrid Ad-hoc and Satellite Networks – the MONET Approach.pdf - on 1 Oct 2010 19:55 by Guido Oddi (version 1) 188k View Download

Figure 4 – Publications website section.

- **Links:** section with links to other projects, entities, organizations, news, etc. that are relevant for MONET. This section contains some links to international conferences and important journals whose topics are related to MONET concepts. The list has been updated, within the period covered by this deliverable, with the open call of papers offered by international conferences. The following figure shows the new international conferences, as reported on the web site:

Some next international conferences for submission of papers

<i>Name</i>	<i>Date and Location</i>	<i>Main topics of interest</i>	<i>Submission Deadline</i>
Third International Workshop on Cross Layer Design (IWCLD 2011)	From 30th of November 2011 to 1st of December 2011, in Rennes, Brittany, France	Cross-layer architectures and mechanisms for wireless communications and networks, Ad-Hoc Networks	5th July 2011
Wireless Ad Hoc and Sensor Networks Symposium (ICNC 2012)	From 30th of January 2012 to 2nd of February 2012, Maui, Hawaii, USA	Ad-Hoc Networks	5th July 2011
The 7th International Conference on Mobile Ad-hoc and Sensor Networks (MSN'11)	16th-18th of December 2011, Beijing, China	Multi-hop wireless networks and wireless mesh networks, Network Mobility	8th July 2011
World Telecommunications Congress 2012 (WTC 2011)	5th-6th of March 2012, Miyazaki, Japan	Mobile ad-hoc, mesh and sensor networks	15th July 2011
7th IEEE International Workshop on the Performance Analysis and Enhancement of Wireless Networks (PAEWN'12)	26th - 29th March, 2012, Fukuota, Japan	Energy saving protocols for wireless/mobile/sensor networks, Mobility Management	1st October 2011

Figure 5 – Next International Conferences relevant for MONET

- **Sitemap:** the map of the MONET website, listing the whole structure of the site.

Both the MONET logo and the website have been the object of MONET deliverable D8.2, delivered at month M6 of the project. It is remarkable to report that typing “ICT MONET” in the input text-field of the Google search engine, the MONET web site is the first to appear. This good feature allows to increase the reachability of the site and the publicity of the MONET project and up-to-date results.

5 Organization and participation to events

This section provides a list of events organized in the context of MONET project and a list of conferences and other dissemination activities to which MONET partners have participated in the period of interest. Section 5.1 illustrates events which have been organized by MONET project to disseminate results. Section 5.2 shows conferences to which MONET partners have participated and other dissemination activities.

5.1 Organization of events

No events were organized during the period covered by this report.

5.2 Conferences and other dissemination activities

5.2.1 PSC Europe Forum Conference

Both TEKEVER and ASTR participated in the PSC Europe Forum Conference held on June 7 and 8 in Brussels, where the MONET partners have initiated a discussion with the PSC Europe secretary General for setting up a dedicated MONET dissemination session during one of the 2012 Conferences. This session will include presentations to the PSC Europe members, possibly discussion groups or several parallel sessions and a showcase of MONET hardware so the end-users can easily review and interact directly with the results and the consortium partners.

5.2.2 Portuguese armed forces and public safety police presentation

TEKEVER also presented the MONET project to different services of the Portuguese armed forces (Navy and Army) and to the public safety police during ad-hoc meetings with these entities during the months of April and May.

5.2.3 Complete list of dissemination activities at M18

This section lists all the dissemination activities carried out in the first period (up to 30th June of 2011) of the MONET project.

5.2.3.1 Major dissemination activities

This section shows a list of all the most relevant events pertinent to MONET project.

Date and Location	MONET partners	Event Name	Main Participants	Objective	Results for MONET
9th September 2009, Madrid, Spain	ISDEFE	Crisis Management and Emergencies	Spanish Ministry of Interior General Directorate of Emergencies and Civil Protection	Dissemination activity of MONET scope and usefulness; obtain their support to collect end-user requirements	The involvement achieved from them for MONET project is as observers
7th-8th April 2010, Toulouse, France	ASTR ISDEFE CRAT UNIS	ISI General Assembly	ISI members and EC/ESA representatives	ISI General Assembly + New organization of working groups + ISI key roles elections	Introduction to MONET project carried out during the Security working group discussion
12th April 2010, Fire Brigade Office in Madrid, Spain	ISDEFE	Dissemination activities towards Madrid City Police	Members of ICT Communication Department of Madrid Police	Explaining MONET concept and obtaining their support as potential end users	The involvement achieved from them for MONET project is as observers
14th-16th April 2010, Portoroz, Slovenia	URSZR	17th Days of Slovene Informatics,	Slovene IT representatives	Presentation of the MONET concept	MONET concept presented to

		URSZR, , Portoroz, Slovenia			the Slovene IT (research, public sector, private sector) community
25th-27th May 2010, Cambridge, UK	UNIS	ETSI Combined Satellite Broadband Multimedia (BSM) and the Mobile Satellite Subsystems (MSS) meeting	BSM community and satellite sectors	Presentation of MONET Concept and idea to BSM community	Appreciated feedback for the MONET project from the meeting
7th June 2010, Madrid, Spain	ALL	MONET End- users Workshop	Madrid local police, Madrid civil protection and SAMUR (Madrid medical emergency services)	Gather information about MONET functional requirements, architecture, implementatio n and demonstration features	Very appreciated information for the MONET project from the interaction
9th June 2010, Paris, France	ASTR	Presentation to the French MoD (DGA)	French EDA IAP4 representant and Technical expert from CELAR	Presentation of the MONET challenges in the Public Safety to assess the possible re- use of such concept in the Military domain	Presentation of MONET project
15th-18th June 2010, Vienna, Austria	URSZR	PSCE – Public Safety Communicatio n Forum	Civil Protection audience, IT and Communication representatives of technical research industry and companies	Presentation of the MONET concept	MONET concept presented to the audience
30th November 2010, Bruxelles, Belgium	ASTR ISDEFE CRAT UNIS TEK	ISI General Assembly	ISI members.	ISI General Assembly + Panels on satellite use (broadband, security and financial mechanisms).	Presentation of MONET project to the Assembly + Dissemination to ISI members, EC representative s.
10th-11th February 2011, Thales Alenia Space	UNIS	ETSI BSM#45 meeting	BSM community and satellite sectors	Presentation of MONET Concept and idea to BSM	Update of the latest state of MONET results

in Toulouse, France				community	
7th and 8th June 2011, Brussels, Belgium.	TEK, ASTR	PSC Europe Forum Conference	PSC Europe secretary General	Participation and discussions during the PSC Europe Forum Conference	Discussion for setting up a dedicated MONET dissemination session during one of the 2012 Conferences

Table 2 – Major dissemination activities related to MONET

5.2.3.2 Other dissemination activities

This section reports a list of other events, such as presentation of papers to International Conferences and personal interviews to expert of the sector.

Date and Location	MONET partners	Event Name	Main Participants	Objective	Results for MONET
17th February, 2009, UME Head Quarter, Madrid, Spain	ISDEFE	Personal interviews with Spanish Military Unit (UME) for Emergencies	UME members	Presentation of MONET in order to involve them first during MONET proposal submission phase and after during the beginning of the project phase to collect their impressions and view about the objectives planned	The involvement achieved from them for MONET project is as observers
17th March 2010, UME Head Quarter, Madrid, Spain.	ISDEFE	Personal interviews with Spanish Civil Guard (Communications Department)	UME members	To obtain from them their ideas and suggestions about MONET functional and operational requirements. One of the missions of Civil Guard is to deal with Spanish Borders Surveillance, and our interest where to involve them to define the Border Control Scenario	The involvement achieved from them for MONET project is as observers
12th April 2010, Fire Brigade Office, Madrid, Spain.	ISDEFE	Personal interviews with Madrid Fire Brigade	Head of Unit of Madrid Fire Brigade	Double finality: a) Explaining to them more in detail technical aspects of the project; b) Collecting valuable information for the definition of Forest Fire Scenario and requirements	They provide crucial end user requirements included in MONET reports (weight of nodes, necessity of relay nodes, number of required fire fighters, operational

					procedures of fire brigades etc)
12th April 2010, Fire Brigade Office, Madrid, Spain.	ISDEFE	Personal interviews with Madrid Medical Services SAMUR	Head of Unit of Madrid Fire Brigade	Double finality: a) Explaining to them more in detail technical aspects of the project; b) Collecting valuable information for the definition of Public Safety Scenarios and requirements	They provide crucial end user requirements included in MONET reports (voice requirements between hospitals and ambulances, number of required medical services, operational procedures of medical services, etc)
14th April 2010 and 14th June 2010, ISDEFE offices and Barajas Airport, Madrid, Spain.	ISDEFE	Personal interviews with AENA	The first interview with two experts in Airport Systems, and the second interview with operations control manager of Barajas airport	a) Gather information about current technologies used in communications within the airport, needs and possible MONET requirements. b) Obtain information about operational procedures, current positioning systems and communications used for airport control, maintenance and emergency operations	They provide crucial information relating Airport Control scenario definition and specific related requirements
16th-18th June 2010, Florence, Italy	UNIS, CRAT	Future Network & Mobile Summit 2010	International conference audience, with strong interest on EU FP7 projects	Presentation of the MONET concept	MONET concept presented to the international research community
20th-22nd September 2010, Portoroz, Slovenia	URSZR	19th International Electrotec	Electrical and computer science experts.	Presentation of the MONET concept and usage the MONET art in the field of public	MONET concept presented to the international research

		Technical and Computer Science Conference		warning systems	community
6th-10th December 2010, Miami, USA	UNIS	IEEE Globecom 2010	Satellite and ad hoc network community on a global scale	Paper Presentation and networking with ad hoc network research community. Chair Ad-Hoc Routing session (UNIS)	Bringing new ideas and state-of-the-art of ad hoc networks to the project
24th March 2011, Toulouse, FRANCE	ASTR	EADS Astrium Internal presentation	Astrium managers and engineers	Identification of possible synergies with other activities, internal dissemination and possible identification of future activities in line with MONET	Discussion ongoing for future activities to pursue MONET investigations
7th-8th June 2011, Brussels, BELGIUM	ASTR, TEK	PSCE Forum	Public Safety key players: users, industrial, operators and institutional representatives	Gather PSC feeling about future communication systems – to be in line in MONET and to keep in mind users requirements and key issues for Public Safety community	Discussion about a possible presentation of MONET results during a next Forum (target in June 2012)
April-May 2011, Portugal	TEK	Ad-hoc meetings	Portuguese Navy, Portuguese Army, Public Safety Police	To present the project, its objectives and achievements to potential end-users and gather their feedback	Project and challenges awareness by the end-user community
17th-20th May 2011	CRAT	ISI General Assembly and ISI-ICT meeting	Satellite segment experts	To assess the status and the future of satellite projects in FP7, being representative of MONET, which is one of the few on-going satellite-related projects	MONET concept presented to the international satellite-segment research community

Table 3 – Other dissemination activities related to MONET

Moreover members of the AlpSAR project were informed about MONET (www.alpsar.eu).

5.3 Outcome of dissemination actions to potential users

During the initial six months of the second year of MONET execution, the consortium has carried out several dissemination actions as described in previous sections of this document. The target audiences for these actions have been varied including not only potential users of a network such as MONET but also of interested industrial and scientific communities and colleagues and staff. Hence, the outcome of said dissemination actions has also been diverse. The scientific and industrial communities (e.g. represented by members of different initiatives like the ISI) have demonstrated great interest in MONET, both in the concept and in the technical research and have engaged in one-to-one discussions with the MONET

representatives at the dissemination events to discuss particular topics, approaches and results.

Regarding the potential end-users, these have been less interested in the technical results and technical research, focusing their interest and comments on the MONET concept and high level results. Generally, all of the potential users that have witnessed dissemination presentations and or discussions have expressed their interest in the MONET concept and on its use for overseas operations (most interest has been shown by civil protection and emergency response workers with activities outside urban areas in Western Europe). Besides this increased awareness to the challenges of hybrid MANET-Satcom networks, users have been particularly cautious in expressing their enthusiasm. Event attendance alternatively by technical staff and by operational staff but seldom by both, means that sometimes the audience lacks a deep understanding of the technical issues underlying the research.

The consortium believes a good level of awareness for the project has been achieved so far. However, the partners are planning to have more focused dissemination actions showing actual terminals running MONET algorithms that will enable users to see and feel with their own hands the research of MONET at play. A first opportunity to do this has already arisen through the invitation from PSCE Forum to host a dissemination event for MONET at one of their semester forums. This will provide the consortium with a unique opportunity to show to a large group of potential end-users the benefits of MONET and for them to interact directly with terminals and project partners (enabling deeper discussions if the need arises). The MONET consortium believes this mechanism will bring the most impact and will result in a higher value outcome (namely, the opportunity for end-users to see first hand the project results).

6 Publications

This section covers a number of dissemination activities carried out in the 6 months from 1st January of 2011 to 30th June of 2011, including papers accepted for publication in journals and conferences with peer reviewing, papers submitted for conferences and journals with peer reviewing, dissemination publications in more general journals.

6.1 Accepted Papers

The following scientific papers have been accepted for publication in scientific conferences with peer reviewing:

- M. Monier, A. Oliveira, "*Improving Public Safety and Security communications thanks to hybrid MANET-Satellite networks*", ISI informs news letter, Issue n°8.



Figure 6 – ISI informs news letter, Issue n°8

- L. Sudan, D. He, Z. Sun et al., “A Cost-Aware Multi-Path Routing Protocol For Multi-Interface Multi-Channel MANET”, accepted for IADIS Wireless Applications and Computing 2011 (WAC 2011), 20-26 July, Rome, Italy.

6.2 Submitted Papers

This section lists the paper submitted to international conferences and journals and have not already been accepted:

- V. Kretzschmar, V. Deslandes, M. Crosnier, P. Boutry, M. Monier, A. Oliveira, Z. Sun, D. Gimenez, A. Pietrabissa, K.B. Juros, “Optimised hybrid MANET- Satellite networks for public safety”, 29th AIAA International Communications Satellite Systems Conference (ICSSC-2011), Nara, Japan, 28th - 1st of December 2011.

7 Standardization

Task 8.3: Standardisation has started at Month 6 and will last up to the end of the project. This document reports all standardisation activities carried up during the period of interest.

Organizations such as IETF, ETSI, ITU-T and MESA are of particular importance to the work considered in MONET and the partners will interact with the relevant working groups or committees to provide contributions. The following table summarises MONET contributions to standardisations efforts:

Relevant Standardisation Body	MONET Contributions	Partners Involved
IETF: <ul style="list-style-type: none"> • IP performance Metrics (ippm) 	Potential contributions to protocols (reactive and proactive); End-to-end	TEK, UNIS

<ul style="list-style-type: none"> MANET WG 	QoS and IP over satellites; MANET architectures	
ETSI: <ul style="list-style-type: none"> TC TISPAN: WG2, WG4, WG8 TC-SES/BSM TC-SES/SatEC Cooperative ad-hoc network 	Inter-working and interoperability with existing networks; Routing; Contribute with needs and aspirations for network management; IP over satellite	TEK, UNIS, ASTR
ITU-T <ul style="list-style-type: none"> ITU-T SG 13 – “NGN” ITU-T SG 12 – “Performance, QoS and QoE 	Architecture, evolution and convergence of next generation networks including planning, implementation scenarios and deployment models; IP QoS, interoperability and implications for NGN.	UNIS
MESA <ul style="list-style-type: none"> TSG-SYS 	Potential contributions to the MESA specifications and system reference models and architectures; knowledge on broadband satellite constellations interconnection.	TEK, ASTR

Table 4 – MONET contributions to standards

In what concerns already developed activities, UNIS attended the ETSI Combined Satellite Broadband Multimedia (BSM) and the Mobile Satellite Subsystems (MSS) meeting on 25-27 May 2010 in Cambridge UK. UNIS submitted an overview MONET presentation, which was registered as SESBSM(10)0016 document. The presentation was well received and generated good interest by ETSI members such as Hughes and Thales Alenia Space. The future plans are to contribute the MONET finalised satellite architecture and solutions to BSM and the MSS groups.

UniS monitored MANET WG activities for last three months. In summary, IETF MANET routing drafts DYMO and OLSR v2 are still ongoing. Both protocols have several implementations however none of them were released as public open source. Several drafts of MANET routing mechanisms are proposed in IETF draft. The most interesting drafts are below list:

- Reliable MANET routing mechanism based on node mobility detection.
- Survey of IP address auto-configuration mechanism for MANET at draft version 5: this draft gives the overview of auto-configuration mechanisms in the literature.
- Dynamic link exchange protocol (DLEP) is proposed for generalized link exchange.
- OLSRv2 backpressure traffic engineering extension considers the traffic engineering factor in MANET routing protocol.
- Multi-path for OLSR v2 is routing algorithm of multi-path in OLSR.

All drafts except the mainstream MANET routing protocols DYMO and OLSR v2 are extension work to the existing protocol. The charter of IETF looks into more general solution in MANET instead of proposed a new MANET routing in the near future.

MANET Neighborhood Discovery Protocol (NDHP) has been standardized as RFC 6130 (Proposed Standard) on April. However, two new related drafts have been submitted. They are OLSRv2 Backpressure Traffic Engineering Extension and Multi-path for Optimized Link

State Routing Protocol version 2. Apart from these, OLSRv2 and DYMO will be discussed on July 2011 - 81st IETF in Quebec City, Canada.

TEKEVER has not established formal contacts with standardisation groups, but has prepared presentation material and established an internal plan and agenda for contacting the relevant groups, namely MESA, ETSI and IETF.

In the framework of WP4 work package, several optimization have been carried out, both based on completely new ideas and modifications of existing standards. Also in the first case, however, comparisons have been performed with existing protocols (e.g. Optimized Link State Routing – OLSR – and so on). The following table aims at illustrating the contribution of MONET project in relation with the current standard protocols, algorithms and techniques, both in terms of standard modification and in terms of comparison.

Standard Algorithm/Protocol	MONET Contribution	Task
ETSI EN 301 790 (DVB-RCS)	The Game-Theoretic algorithm for dynamic bandwidth allocation (see D4.2) is fully compliant with the DVB-RCS standard, in terms of available parameters and formatting of capacity requests.	T4.2
Optimized Link State Routing (OLSR)	Compliance of geo-based routing and energy-aware routing with OLSR V2.	T4.3
Optimized Link State Routing (OLSR)	Comparison of Energy-Aware and Fault Tolerant Q-Routing for the MANET segment (see D4.3) with OLSR, in terms of energy consumption and tolerance to link failures/mobility.	T4.3
Anycast routing extension to OLSR	Anycast is proposed to enhance satellite access point optimal selection.	T4.3
Optimized Link State Routing	Comparison of COPE-like network coding with OLSR in order to enhance delivery ratio and throughput.	T4.3

Table 5 – Standards modified and used for comparison in WP4

8 User Advisory Board

The following table shows the list of experts that have been contacted for the invitation into the MONET User Advisory Board.

Organization	Country	POC Name	POC Position	Advisory Board	Partner initiating contact
PSP (Portuguese Police)	PT	Subintendente Rui Moura	GEP Director	Yes	TEK

Portuguese Civil Protection	PT	Dr. Giuseppe Cornaglia	Information Systems Director	Yes	TEK
		Mr. Rui Filipe	Communication Systems Director	Yes	TEK
		Dra. Ana Martins; Dra. Carla Barreiros	International Relations Office		TEK
		Colonel José Codeço	National operational commander	Yes	TEK
Portuguese Medical Emergency Services	PT	Dr. António Dias	Aide to board of directors	No reply	TEK
ANBP	PT	Dra. Sandra Vieira	Aide to directors	No reply	TEK
ESA	EU	Dr. Pierluigi Mancini	Head of the Awareness Activities and Feasibility Studies Division Directorate of Telecommunications and Integrated Applications	No reply	TEK
ESA	EU	Mr. Amnon Ginati	Head of Integrated and Telecommunications Related Applications Department TIA-A	No reply	TEK
Madrid City Council - Security General Direction – City Police	ES	Mr. Fernando Garcia Ms. Sara Gutierrez	Fernando García is Head of the Innovation Department; Sara Gutierrez is Unit Chief of Innovation at the Innovation Department.	Yes. They have shown great interest in Madrid Workshop.	ISDEFE
Madrid City Council – Civil Protection - Fire Brigade	ES	Mr. Jose Luis Sanz	Fire Brigade Chief Guard	Yes (see interview minutes in D2.2 Section 6.1.2)	ISDEFE

Madrid City Council – Civil Protection - Medical Services SAMUR	ES	Mr. Juan Antonio del Moral	Technician in Special procedures and logistics	Yes (see interview minutes in D2.2 Section 6.1.3)	ISDEFE
AENA (Spanish Airports and air Navigation)	ES	Mr. Miguel Ángel Martín López	Operations Control Manager at AENA	Yes (see interview minutes in D2.2 Section 6.1.5)	ISDEFE
NEXTEL (Assistance to AENA)	ES	Ms. Carmen García Arcal	AENA Technical Assistance	Yes (see interview minutes in D2.2 Section 6.1.4)	ISDEFE
ISDEFE (Assistance to AENA)	ES	Mr. Andrés Arranz Stancel	AENA Technical Assistance	Yes (see interview minutes in D2.2 Section 6.1.4)	ISDEFE
SAMU 32	FR	Dr. Jean-Maurice Guez	Head of Emergency Department	No reply	TEK
General Secretariat for Civil Protection and Disaster Relief	GR	Mr. Konstantinos Papavasileiou	Technical support to Information Systems and Communication	No reply	TEK, ASTR
SDIS32	FR	Col. Dominique Pescher	Director	No reply	TEK, ASTR
PSC Europe	EU	Ms. Marie-Christine Bonnamour	Secretary General	Contacted, Awaiting decision	TEK, ASTR

Conclusions

This report presented the activities developed in the context of MONET work package WP8 in the third 6 months of the project, in the period from the 1st January 2011 to the 30th June 2011. The report includes both already executed activities and some of the plans for the remainder of the project.

The objectives of the WP8 activities are to ensure the dissemination of the project results to a wide reaching audience, in order to make external stakeholders and the community in general more aware of the results achieved by MONET, as well as to encourage the academy and the industry to refine and use them. A particular attention is given to standardisation task: the interaction between the MONET partners and the relevant working groups and committees is carried out in order to monitor and provide contributions to the working group activities. Another objective of WP8 is to create adequate conditions for extensive exploitation of MONET results, during and after project execution.

In the period covered by this report, the following activities were carried out:

- Update of the MONET public website following the project developments.
- Submission of papers to peer-reviewed conferences and journals, based on MONET research work.
- Participation to international workshops and conferences.
- Dissemination of MONET concept in conferences and seminars.
- Standardisation activities.
- Contact of experts to be invited into the MONET User Advisory Board.

The outcome of dissemination actions carried out so far has been somewhat limited to creating and increasing potential users' awareness to the challenges and importance of hybrid communication networks such as MONET. The consortium is planning to collect feedback and inputs regarding the results obtained so far from end-users at dedicated events in the future (two of these include the possibility to make a dedicated dissemination event at a forum of PSCE and another will be the MONET field test to be held in Madrid next year).

Several dissemination activities are expected to be carried out within the third year of the project, in terms of the publication of scientific articles in journals and conferences and the participation to conferences and workshops. Standardisation activities related to optimizations performed in the context of the WP4 will be carried out as well as the exploitation of the results obtained by the single partners and the MONET project as a whole.



References

FP7-ICT MONET (Mechanisms for Optimization of hybrid ad-hoc networks and satellite NETWORKS) collaborative project financed under grant agreement n. 247176 and started on January 1st, 2010.

MONET project website, <http://www.ict-monet.eu>.

Google sites, <http://sites.google.com/>.

PSCE Forum, Public Safety Communication Europe Forum, <http://www.psc-europe.eu/>.

IETF, The Internet Engineering Task Force, <http://www.ietf.org/>.

ETSI, European Telecommunications Standards Institute, www.etsi.org/.

ITU-T, International Telecommunication Union – Telecommunication Standardization Bureau, <http://www.itu.int/ITU-T/>.

MESA, Mobility for Emergency and Safety Applications, <http://www.projectmesa.org/>.

OLSR, Optimized Link State Routing Protocol, <http://www.ietf.org/rfc/rfc3626.txt>.