





Contract no.: 257118

# FISI Project - contract n°257118 D4.5.1 SatCom event report - 1st year

#### FISI project executive summary

The FISI project aims at supporting the Integral SatCom Initiative (Technology Platform) in defining a strategic vision on innovation priorities to reinforce the competitiveness of the European SatCom industry and in promoting emerging SatCom architectures in response to EU policy objectives.

Involving leading European satellite manufacturers, Research Institutes/Universities, SME, and a Service provider in the SatCom domain, FISI will serve the interest of all European SatCom industry stakeholders gathered in the ISI technology platform (www.isi-initiative.org) by highlighting and promoting the added value of emerging SatCom architectures in the support of EC grand challenges including broadband for all, security and Future Internet; Harmonising the research and innovation priorities for the European SatCom industry sector; And promoting an ambitious framework program to maintain the technological edge, international competitiveness and market share of the European SatCom industry.

#### **Abstract**

This deliverable contains the report of the 4<sup>th</sup> ISI SatCom event which was held on October 18-19, 2011 in Brussels, Belgium. Taking into account the outcomes of such event, the document also provides some indications regarding potential panels which could be organized for the next 5<sup>th</sup> ISI SatCom day which will be held on March 2012.

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## 1 Introduction

Note: This is a draft version of the deliverable D4.5.1. The final document will be delivered to EC by November 2, 2011 along with the periodic report. This is due to the ISI Steering Council decision of holding the SatCom event in October 2011.

This deliverables contains the report of the 4<sup>th</sup> ISI SatCom event which was held on October 18-19, 2011 in Brussels, Belgium.

The ISI SatCom event aimed at focusing the discussion on key topics related to the role of SatCom in Europe. Five different panels were organized along with a keynote speech for each session:

- Panel #1 ISI & EU security: aimed at defining how SatCom can support EU internal and external security, also including support to emergency services to face global and local crises, and identifying the SatCom role in a global, integrated & secure communication infrastructure.
- Panel #2 ISI & Future Internet: aimed at defining how satellites can play a part in meeting the grand challenges in future networks, specifying the SatCom role in the Future Internet framework, and identifying SatCom key features to be applied in the Future Internet services.
- Panel #3 ISI & Emerging Economies: aimed at defining how SatCom can support developing countries, for which application scenarios (public services, emergency services, telemedicine, e-learning, etc.) SatCom can be a key technology in those countries which lack in infrastructure and how SatCom can help to bridge the digital divide in such countries.
- Panel #4 ISI & Rural Development: aimed at discussing how future Satellite Broadband access can contribute to the development of rural areas.
- **Panel #5 ISI & International Cooperation:** aimed at discussing possibilities to cooperate with partners beyond Europe, regarding cooperative research at earlier stages of the overall innovation chain.

Comments from audience have been collected in order to have a feedback useful for the organization of the subsequent SatCom event and to better understand the interests and the opinions of the participants on the discussed topics.

In the following, the outcomes of 4<sup>th</sup> ISI SatCom event are reported along with some indications for the next ISI SatCom day regarding the organization and potential topics to be discussed.

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# 2 The 4<sup>th</sup> ISI SatCom Event

The 4<sup>th</sup> ISI SatCom event was a two half-day meeting (October 18, 2011 in the afternoon, October 19, 2011 all day) held at Conseil Central de l'Economie (CCE) – Room 1, 17-21, avenue de la Joyeuse entrée, Brussels. It was co-located with the 14<sup>th</sup> ISI General Assembly.

The event was structured in key note speeches and panel discussions where participants presented their vision and opened the discussion on the selected topic. In particular, two sessions was organized on the first day and three sessions on the next day, as reported in the Agenda<sup>1</sup> below.

## October 18th, 14:30 - 18:30

Time Schedule	Agenda item description	
14:30	Welcome + Coffee	
15:00-15:30	Key note speech – Karl Von Wogau, President of the Kangarro group (former MEP)	
15:30-16:30	1 <sup>st</sup> Panel discussion: ISI & EU Security Moderated by P. Boutry (Astrium), V. Fogliati (Telespazio)	
16:30	Coffee break	
17:00-17:30	Key note speech – Ms. Maria Guta (ESA/ESTEC) – ESA TO for FI-SatCom and Satellite M2M studies	
17:30-18:30	2 <sup>nd</sup> Panel discussion: ISI & Future Internet Moderated by K. Liolis (Space Hellas), A. Yun (Thales Alenia Space)	
18:30	End of session	
20:00	ISI dinner	

### October 19th, 09:00 - 18:00

Time Schedule	Agenda item description	
09:00	Welcome + coffee	
09:30 - 10:00	Key note speech - Martin Jarrold, Global VSAT Forum	
10:00 – 11:30	3 <sup>rd</sup> Panel discussion: ISI & Emerging Economies Moderated by J. Sesena (Rose), B. Evans (CCSR)	
11:30-13:30	Lunch	
13:30 – 14:00	Key note speech – Aleksander Lazarevic, European Commission Information Society and Media Directorate General Policy Coordination and Strategy Directorate	
14:00 – 15:30	4th Panel discussion: ISI & Rural Development Moderated by K. Prescot (Avanti), L. Thomasson (Astrium)	

<sup>&</sup>lt;sup>1</sup> Note that this Agenda is that available at the delivery date. Modifications on this could be introduced during the finalization of the event organization. The Agenda will be updated accordingly and reported in the final version of the deliverable.

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15:30 – 16:00	Coffee break	
16:00 – 16:30	Key note speech – L. Bochereau (head), D.1 unit "International cooperation policy", Directorate D "International cooperation", DG Research & Innovation (European Commission).	
16:30 – 18:00	5 <sup>th</sup> Panel discussion: ISI & International Cooperation Moderated by Julian Sesena, (Rose Vision)	
18:00	End of session	

In the following, the summary of each panel discussion is reported along with the feedback received from audience.

## 2.1 Panel #1: ISI & EU security

#### 2.1.1 Rationale and Goal

This panel aims at discussing the opportunity to launch an ambitious framework program on SatCom to the institutional demand in SatCom for Security at European Level in support of a European Security policy and at identifying the way forward.

## 2.1.2 Panel Organizer

The Panel has been organized by:

- Philippe Boutry, Leader of the ISI Markes & SatComs solutions Working Group
- Vincenzo Fogliati, Leader of the ISICOM Task force

The Panel organizers have been in charge of:

- inviting the Panelist;
- identifying the moderator among the invited panelist on the basis of the experience and skills of spur discussion on the Panel topic;
- producing a list of key questions to be addressed by the Moderator to the Panelists;
- producing a list of key questions to be used by selected ISI members in the audience to keep alive the discussion;
- identifying four or five ISI members to be serve as facilitator of the discussion (see previous bullet points).

#### 2.1.3 Key note speech

The keynote speech has been:

• Karl Von Wogau, President of the Kangarro group (former MEP).

### 2.1.4 Panel Participants

**TBC** 

### 2.1.5 Questions or topics addressed during the panel

TBC

#### 2.1.6 Comments from audience

**TBC** 

## 2.1.7 List of attendees to the panel

In the following table, the list of the participants to the panel is reported.

Name	Last Name	Affiliation

## 2.2 Panel #2: ISI & Future Internet

#### 2.2.1 Rationale and Goal

The panel aims at discussing these Future Internet aspects and at identifying proper actions to be performed by the SatCom Community and by Public Institutions in support of Future Internet objectives and implementation especially in the area of networked media.

The main goal is to assess the role of SatCom with respect to Future Internet evolutions.

## 2.2.2 Panel Organizer

The Panel has been organized by:

- Ana Yun, Vice-Leader of the Markets & SatComs Solutions" Working Group
- Konstatinos Liolis, Member of the Markets & SatComs Solutions" Working Group

The Panel organizers have been in charge of:

- inviting the Panelist;
- identifying the moderator among the invited panelist on the basis of the experience and skills of spur discussion on the Panel topic;
- producing a list of key questions to be addressed by the Moderator to the Panelists;
- producing a list of key questions to be used by selected ISI members in the audience to keep alive the discussion;
- identifying four or five ISI members to be serve as facilitator of the discussion (see previous bullet points).

### 2.2.3 Key note speech

The keynote speech has been:

• L. Bochereau (head), D.1 unit "International cooperation policy", Directorate D "International cooperation", DG Research & Innovation (European Commission).

#### 2.2.4 Panel Participants

**TBC** 

#### 2.2.5 Questions or topics addressed during the panel

**TBC** 

#### 2.2.6 Comments from audience

**TBC** 

### 2.2.7 List of attendees to the panel

In the following table, the list of the participants to the panel is reported.

Name	Last Name	Affiliation

## 2.3 Panel #3: ISI and Emerging Economies

#### 2.3.1 Rationale and Goal

The panel aims at identifying proper actions to be performed by the SatCom Community from a global perspective and, in particular, by Public Institutions in support of emerging economies.

The main goal is to specify the role of SatCom from a global perspective including consideration to the needs of emerging countries and to which needs SatCom should respond.

#### 2.3.2 Panel Organizer

The Panel has been organized by:

- Julian Sesena, Leader of Regulatory & Standardization Working Group
- Barry Evans, Member of the ISI Steering Council

The Panel organizers have been in charge of:

- inviting the Panelist;
- identifying the moderator among the invited panelist on the basis of the experience and skills of spur discussion on the Panel topic;
- producing a list of key questions to be addressed by the Moderator to the Panelists;
- producing a list of key questions to be used by selected ISI members in the audience to keep alive the discussion;
- identifying four or five ISI members to be serve as facilitator of the discussion (see previous bullet points).

### 2.3.3 Key note speech

The keynote speech has been:

TBC

### 2.3.4 Panel Participants

**TBC** 

### 2.3.5 Questions or topics addressed during the panel

**TBC** 

#### 2.3.6 Comments from audience

**TBC** 

## 2.3.7 List of attendees to the panel

In the following table, the list of the participants to the panel is reported.

Name	Last Name	Affiliation

## 2.4 Panel #4: ISI & Rural Development

#### 2.4.1 Rationale and Goal

The panel aims at discussing future Satellite Broadband access can contribute to the development of rural areas. The SatCom industry roadmap will be presented in order to highlight the current and planned SatCom capabilities in terms of broadband access putting emphasis on the Quality of Service. Some programmatic aspects will be discussed.

### 2.4.2 Panel Organizer

The Panel has been organized by:

- Kevin Prescott, Avanti Communications representative
- Laurent Thomasson, EADS Astrium representative

The Panel organizers have been in charge of:

- inviting the Panelist;
- identifying the moderator among the invited panelist on the basis of the experience and skills of spur discussion on the Panel topic;
- producing a list of key questions to be addressed by the Moderator to the Panelists;
- producing a list of key questions to be used by selected ISI members in the audience to keep alive the discussion;
- identifying four or five ISI members to be serve as facilitator of the discussion (see previous bullet points).

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#### 2.4.3 Key note speech

The keynote speech has been:

• Aleksander Lazarevic, European Commission Information Society and Media Directorate General, Policy Coordination and Strategy Directorate.

## 2.4.4 Panel Participants

**TBC** 

## 2.4.5 Questions or topics addressed during the panel

**TBC** 

#### 2.4.6 Comments from audience

**TBC** 

## 2.4.7 List of attendees to the panel

In the following table, the list of the participants to the panel is reported.

Name	Last Name	Affiliation

## 2.5 Panel #5: ISI & International Cooperation

#### 2.5.1 Rationale and Goal

The panel aims at discussing possibilities to cooperate with partners beyond Europe, regarding cooperative research at earlier stages of the overall innovation chan. This cooperation will benefit on many aspects, like innovative spectrum usage by SatCom systems in order to promote a worldwide harmonized spectrum and related regulatory framework, adoption of standards at worldwide level, etc.

In particular, the panel should discuss the opportunities and interference issues associated with the implementation of cognitive radio schemes in the context of SatCom systems.

#### 2.5.2 Panel Organizer

The Panel has been organized by:

Julian Sesena, Leader of Regulatory & Standardization Working Group

The Panel organizer has been in charge of:

inviting the Panelist;

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- identifying the moderator among the invited panelist on the basis of the experience and skills of spur discussion on the Panel topic;
- producing a list of key questions to be addressed by the Moderator to the Panelists;
- producing a list of key questions to be used by selected ISI members in the audience to keep alive the discussion;
- identifying four or five ISI members to be serve as facilitator of the discussion (see previous bullet points).

## 2.5.3 Key note speech

The keynote speech has been:

• L. Bochereau (head) or J. Claxon (Deputy), D.1 unit "International cooperation policy", Directorate D "International cooperation", DG Research & Innovation (European Commission)

## 2.5.4 Panel Participants

TBC

## 2.5.5 Questions or topics addressed during the panel

**TBC** 

#### 2.5.6 Comments from audience

TBC

## 2.5.7 List of attendees to the panel

In the following table, the list of the participants to the panel is reported.

Name	Last Name	Affiliation

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## **3** The 5<sup>th</sup> ISI SatCom Event

In the following, some topics for the next ISI SatCom day are proposed taking into account the topics discarded from the previous one, due to time constraints, and some new topics selected through discussions within the consortium.

The format will be, probably, a Workshop on "SatCom Trends and Key Isses", and it will be organized by TNO. During such event, the outcome of a survey on "SatCom Trends and Key Isses" initiated and developed by TNO will be discussed with SatCom stakeholders.

The survey has the following goals:

- Extracting Technical trends, Market trends and Challenges.
- Achieving a common understanding on the way forward for SatCom topics, based on the survey results.
- Contributing and influencing the space agenda of European policy makers.

More information about the scope of the  $5^{th}$  ISI SatCom day will be reported in the deliverable D4.4.2 "SatCom event concept-  $2^{nd}$  year".

## 3.1 Topic #1: ISI & SatCom trends

#### 3.1.1 Rationale and Goal

The panel aims at discussing the trends in SatCom and the necessary R&D and Innovation activities to be carried out to develop future SatCom solutions that will find a market.

The panel should address in particular:

- Trends/Challenges for each SatCom Market segments: Broadcast, broadband access, backbone, security.
- The technical and regulator enablers for future SatCom solutions.
- The expected support from public institutions to undertake R&I activities.

## 3.1.2 Panel Organizer

The following position is a possible candidate for the Panel organization:

TNO representatives

The Panel organizer will be in charge of:

- inviting the Panelist;
- identifying the moderator among the invited panelist on the basis of the experience and skills of spur discussion on the Panel topic;
- producing a list of key questions to be addressed by the Moderator to the Panelists;
- producing a list of key questions to be used by selected ISI members in the audience to keep alive the discussion;
- identifying four or five ISI members to be serve as facilitator of the discussion (see previous bullet points).

### 3.1.3 Key note speech

The following keynote speech is proposed:

• Riccardo De Gaudenzi, Head of RF Payload Systems Division, ESA.

This aims at providing ESA view on this subject.

#### 3.1.4 Panelists' Profile

Profile	Panelist	Topics to be addressed
SatCom manufacturing industry	TBC	TBC
Service provider	TBC	TBC
End-user: Broadcasters, Telcos,	TBC	TBC
Telecom operator	TBC	TBC
Research institutes	TBC	TBC

## 3.2 Topic #2: ISI & Energy/Environment

#### 3.2.1 Rationale and Goal

The panel aims at discussing energy consumption and environmental issues and at identifying proper actions to be performed by the SatCom Community and by Public Institutions in support of energy aware ICT solutions and networks, and in support of environmental resources monitoring and management.

The main goals are related to how SatCom can contribute to energy saving, how SatCom can support the CO2 emissions and to identify the role that SatCom can play in Smart Grids as well as to define how satellites can contribute to water management, including demand-side management, integrated water resource management frameworks and comprehensive decision support systems.

#### 3.2.2 Panel Organizer

The following position is a possible candidate for the Panel organization:

• Member of the ISI Steering Council

The Panel organizer will be in charge of:

- inviting the Panelist;
- identifying the moderator among the invited panelist on the basis of the experience and skills of spur discussion on the Panel topic;
- producing a list of key questions to be addressed by the Moderator to the Panelists;
- producing a list of key questions to be used by selected ISI members in the audience to keep alive the discussion:
- identifying four or five ISI members to be serve as facilitator of the discussion (see previous bullet points).

#### 3.2.3 Panellists' Profile

A panelist will be invited from each one of the following categories:

- Large industry and telecom operators
- SMEs developing applications in this field

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- Civil construction
- Power Distribution Operator
- Industry offering earth observation by satellite services
- Public Administrations: Municipality administration with responsibilities on environment
- Research centre specialized on environment and monitoring techniques
- European Commission, e.g., DG Agriculture, DG Research, DG Enterprise
- Other ETP/JTI

The invited panelists from the above categories will be selected on the basis of their involvement in energy consumption/environment issues.

## 3.2.4 Background

Satellites are naturally **green**, since they are totally powered by solar energy, and thus they can be considered as key environmental friendly elements to expand network infrastructures.

This is very important nowadays since smart use of technology is crucial to address the challenges facing society like climate change.

The ICT sector plays a key role in improving energy efficient policies:

- ICT offers potential for a shift towards less-resource intensive products and services for **energy savings** in buildings and electricity networks, as well as for more efficient and less energy consuming intelligent transport systems.
- The ICT sector will set targets **to reduce energy use and greenhouse gas emissions** for all processes involved in production, distribution, use and disposal of ICT products and delivery of ICT services.

Cooperation among the ICT industry, other sectors and public authorities is essential to accelerate development and wide-scale roll out of ICT-based solutions for smart grids and meters, near-zero energy buildings and intelligent transport systems. It is essential to empower individuals and organizations with information that will help them reduce their own carbon footprint. The ICT sector will deliver modeling, analysis, monitoring and visualization tools to evaluate the energy performance and emissions of buildings, vehicles, companies, cities, and regions. Smart grids are essential for a shift towards toward a low carbon economy. They will enable active control of transmission and distribution via advanced ICT infrastructure communication and control platforms. For the different grids to work together efficiently and safely, open transmission-distribution interfaces will be needed.

Although there is no standard global definition, the European Technology Platform Smart Grids defines smart grids as electricity networks that can intelligently integrate the behaviour and actions of all users connected to it - generators, consumers and those that do both - in order to efficiently deliver sustainable, economic and secure electricity supplies.

Smart Grids do not only supply power but also information and intelligence. The "smartness" is manifested in making **better use of technologies and solutions** to better **plan and run** existing electricity grids, to **intelligently control generation** and to enable **new energy services** and **energy efficiency** improvements.

Smart grids' promise of ubiquitous, real-time information sharing isn't feasible without satellite broadband in the networking infrastructure.

The ideal smart grid communications network requires multiple transport technologies and standards, undoubtedly including terrestrial fixed and wireless broadband, and all coalescing around an IP backbone. However, a terrestrial-only architecture is vulnerable to disasters on the ground, whether natural or manmade, and cannot alone ensure fail-safe operation. To achieve that means employing a true alternate communications path, which only satellite provides. The resulting hybrid terrestrial and satellite network can realize the high reliability and availability demanded across the entire smart grid, including the necessary combination of reach, capacity and bandwidth scalability.

The ideal smart grid architecture will therefore seamlessly blend redundant wire-line, wireless and satellite communications channels to yield the highest possible reliability and availability. Keeping it also affordable means deploying the most cost-effective technology at each site and backing up those that are operationally critical as a minimum, with the overall constraint of having no single points-of-failure.

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Satellite networking technology has developed rapidly and now delivers the combination of high performance, availability, and security that can greatly aid smart grid efforts for the utility industry. Indeed, satellite solutions are an essential part of the multi-technology approach required by the utility industry to achieve an end-to-end, smart grid communications infrastructure — one that is reliable, fast, secure, and cost-efficient.

On the other hand, the contribution of SatCom to environmental resources monitoring and management is mainly related to water management, including demand-side management, integrated water resource management frameworks and comprehensive decision support systems.

A new generation of Earth observation satellites could have a key role in the monitoring of natural resources and its protection.

The role of the satellite in this field is related also to the ICT role in establishing sustainable cities, leading to higher environmental performance in urban areas.

## 3.3 Topic #3: ISI & Network Media

#### 3.3.1 Rationale and Goal

The panel aims at discussing the evolution of the networked media service context in order to identify trends for satellite systems and possible opportune hybridization of service with broadband.

## 3.3.2 Panel Organizer

The following position is a possible candidate for the Panel organization:

Avanti communications representatives

The Panel organizer will be in charge of:

- inviting the Panelist;
- identifying the moderator among the invited panelist on the basis of the experience and skills of spur discussion on the Panel topic;
- producing a list of key questions to be addressed by the Moderator to the Panelists;
- producing a list of key questions to be used by selected ISI members in the audience to keep alive the discussion;
- identifying four or five ISI members to be serve as facilitator of the discussion (see previous bullet points).

#### 3.3.3 Keynote speech

The following keynote speech is proposed:

- Luis Rosello-Rodriguez, head of D1 unit "Future Networks"
- B. Arroyo Fernández, head of D2 unit "Networked Media Systems" within Directorate D "Converged Networks & Services" of Directorate General Infso

This aims at providing a general view on the evolving networked media context and showing the convergence with broadband access network.

## 3.3.4 Panellists' Profile

A panelist will be invited from each one of the following categories:

- Market analyst
- HBBTV
- Content provider
- Broadcaster

- Network operator
- Satellite operator
- SatCom system prime

The invited panelists from the above categories will be selected on the basis of their involvement in the networked media services:

Candidate Panelist   Topics to be addressed	
IDATE	To report about market trends
IRT	To give an overview of the trends in standards on distribution networks
TF1, BBC	To highlight the impacts on the content/service provisioning business
Sky	To highlight the impacts on the broadcasting business
Orange, TIM	To highlight the impact on broadband access network
Avanti	To highlight the impacts on the satellite business
TAS	To promote innovative SatCom systems in this context

## 3.3.5 Background

According to IDATE, Video consumption has evolved from a passive mass consumption based on broadcasting, to a more personalized and non-linear way of watching video programs. Pre-recorded video contents are becoming increasingly popular and services such as VOD, catch-up TV and PVR functionalities are now developing significantly. This shift in usages is allowed by an IP migration and a dematerialization of all types of contents.

In a context of multitasking spreading, especially among young people, video contents need to integrate more and more interactivity. Viewers like to access additional information regarding the TV program they are watching, information which is available on the Internet, and to interact with their community of friends about this program. Moreover, the trend is to implement applications and widgets in order to facilitate the transfer of video contents between the different terminals of the digital home.

Video contents represent the main part of IP traffic (60% of the Internet traffic is generated by consumers' video usages) and according to Cisco's forecasts, this trend should continue as the annual growth rate of online video should be 70% between 2008 and 2013. The increasing number of video contents providers and the development of HD video programs, and 3D soon, are among the main explanations.

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## 4 Conclusions

This deliverable has summarized the outcomes of the  $4^{th}$  ISI SatCom event which was held on October 18-19, 2011, in Brussels.

TBC

Note: This is a draft version of the deliverable D4.5.1. The final document will be delivered to EC by November 2, 2011 along with the periodic report. This is due to the ISI Steering Council decision of holding the SatCom event in October 2011.

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# 5 Annex A – List of attendees to the 4<sup>th</sup> ISI SatCom day

In the following table, the list of all participants to the 4<sup>th</sup> ISI SatCom day is reported.

No o	Last Name	Affiliation
Name	Last Name	Attiliativii
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## **Appendix: FISI internal document control**

Contributors:	TBC	
Authors:	G.E. Corazza (UNIBO), A. Vanelli-Coralli (UNIBO), R. Suffritti (UNIBO), M. Neri (UNIBO)	
Verified by:	A. Vanelli-Coralli (UNIBO)	
Approval:	N. Chuberre (TAS-F)	
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Version	Date	Comment	
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	2011		
0.2	12 September	Document Updated according to the comments of FISI coordinator	
	2011		
0.3	13 September	Document Updated according to comments of FISI Partners	
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