



## CELTIC-PLUS/EUREKA Smart Connected World

**Project-ID: C2012/1-1  
ACEMIND**



### Deliverable D5.1

#### Initial Plan for Dissemination

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#### Abstract

The purpose of this document is to steer and control the dissemination and exploitation policy and activities of ACEMIND. It outlines the objectives, activities and processes of ACEMIND in regard to dissemination and exploitation of project results.

#### Keyword list

*Dissemination, tutorial, communication, publications*

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## Executive Summary

The purpose of this document is to steer and control the dissemination and exploitation policy and activities of ACEMIND. It outlines the objectives, activities and processes of ACEMIND in regard to dissemination and exploitation of project results.

The actual and planned dissemination activities include online and offline publications, events, and relationships with relevant bodies and initiatives.

The exploitation of project results is essential for the economic impact of ACEMIND's research. All manufacturers and operators involved in the project are committed to the exploitation of the results for the planning of future communication systems and devices. The exploitation of the results includes both common objectives as well as individual objectives, depending on the specific interests of the respective ACEMIND partner.

This document will be regularly updated. The next major update is due in month 20. The final version will be available on month 36.

### **Impact on the other Work-packages**

The results of this deliverable impact all work packages of the ACEMIND project since it promotes all the work achieved within the project and at the same time concentrates all the comments from the international community via the participation to international and national events.

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## Document History

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Olivier	Bouchet	0.1	Creation
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## List of Acronyms

Acronym	Meaning
<ACEMIND>	<Advanced Convergent and Easily Manageable Innovative Networks Design>
AC	alternating current
ACK	acknowledgement
ADSL	asymmetric digital subscriber line
ANSI	American National Standards Institute
AODV	Ad hoc On-demand Distance Vector
AP	access point
AT	access and terminals; analogue & digital terminals
ATTM	access, terminals, transmission, and multiplexing
AV	audio-visual; audio/video
AVB	audio video bridging
BLE	BlueTooth Low Energy
BPSK	binary phase shift keying
BSS	basic service set
CaON	Converged and Optical Networks
CAT	category
CATV	cable television
CDMA	Code Division Multiple Access
CE	consumer electronics
CENELEC	European Committee for Electrotechnical Standardization (Comité Européen de Normalisation Electrotechnique)
CEPT	European Conference of Postal and Telecommunications Administrations
CERP	European Committee for Postal Regulation
CISPR	International Special Committee on Radio Interference (Comité Internationale Spécial des Perturbations Radioelectrotechnique)
CO	confidential
CPE	customer premises equipment
CSMA	carrier sense multiple access
CSMA/CA	carrier sense multiple access collision avoidance
CSMA/CD	carrier sense multiple access collision detection
CWMP	CPE WAN Management Protocol
DAA	detect and avoid

DCF	distributed coordination function
DHS	Digital Home Standard
DLNA	Digital Living Network Alliance
DSL	Digital Subscriber Line
DVB	digital video broadcasting
EC	European Commission
ECC	Electronic Communications Committee
Ecma	European Computer Manufacturers Association
EDCA	enhanced distributed channel access
EMC	electromagnetic compatibility
EN	European norm
ERM	Electromagnetic Compatibility and Radio Spectrum Matters
ET	Engineering and Technology
ETSI	European Telecommunications Standards Institute
BRAN	Broadband Radio Access Networks
EU	European Union
FCC	Federal Communications Commission
Gbps	Gigabit per second
GHz	Gigahertz
HD	high definition
HDTV	high definition television
HGI	Home Gateway Initiative
HILI	High Level Interface
HIP	Host Identity Protocol
hn	home networking
hnta	home networking terminal adapter
HPAV	HomePlug AV
HSI	high speed interface
HW	hardware
HWMP	Hybrid Wireless Mesh Protocol
ICT	information and communications technologies
ID	identifier
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IEEE-SA	IEEE Standards Association

IETF	Internet Engineering Task Force
IP	Internet Protocol
IPTV	internet protocol television
IR	infrared
IrDA	Infrared Data Association
ISM	industrial, scientific, and medical
ISO	International Organization for Standardization
IT	information technology
ITE	information technology equipment
ITU	International Telecommunication Union
ITU-R	International Telecommunication Union - Radiocommunication Sector
ITU-T	International Telecommunication Union - Telecommunication Standardization Sector
JEITA	Japan Electronics and Information Technology Industries Association
JTC	joint technical committee
L3MP	Layer 3 Mobility Prediction
LAN	local area network
LDPC	low density parity check
LiFi	Light Fidelity
LLC	Logical Link Control
MAC	media access control
MAN	metropolitan area network
MAP	mesh access point
Mbps	Megabit per second
MHz	Megahertz
MIB	management information base
MICS	media independent command service
MIES	media independent event service
MIH	media independent handover
MIIS	media independent information service
MIMO	multiple input multiple output
MIP	Mobile IP
MIPv4	Mobile Internet Protocol version 4
MIPv6	Mobile Internet Protocol version 6
MP	mesh point

NAT	network address translation
NGN	next generation networks
OFDM	orthogonal frequency division multiplexing
ACEMIND	Home Gigabit Access
PAR	project authorization request
PC	personal computer
PHY	physical layer
PLC	powerline communication
PLT	powerline telecommunications
PON	passive optical network
PT	project team
Q	question, quarter
QAM	quadrature amplitude modulation
QoS	quality of service
QPSK	quadrature phase shift keying
R&D	research and development
RES	Radio Equipment and Systems
REV	revision
RF	radio frequency
RFC	request for comments
SC	single carrier; study committee
SDTV	standard definition television
SG	study group
SIG	special interest group
SIP	Session Initiation Protocol
SME	small and medium enterprise
SOHO	small office / home office
Std	standard
SW	software
TC	technical committee
TCP	Transport Control Protocol
TDMA	time division multiple access
TG	task group
TS	technical specification
TV	television

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UM	usage model
URL	uniform resource locator
UROOF	Ultra-wideband over Radio over Optical Fibre
US	United States
USB	universal serial bus
USB-IF	USB implementers forum
VDSL	very high speed digital subscriber line
VHT	very high throughput
VLAN	virtual local area network
VLC	visible light communications
VLCC	Visible Light Communications Consortium
VoIP	voice over internet protocol
WAN	wide area network
WCDMA	Wideband Code Division Multiple Access
WG	working group
Wi-Fi	wireless fidelity
WLAN	wireless local area network
WMM	Wi-Fi Multimedia
WP	workpackage
WPA	wireless protected access
WPAN	wireless personal area network
WWRF	Wireless World Research Forum
xDSL	any DSL technology



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# 1 Purpose of this document

The purpose of this “Initial plan for dissemination” is to steer and control dissemination and exploitation policy and activities. This plan will be regularly updated. The next update is due in month 20.

## 2 Dissemination of project results

In this chapter we will describe the dissemination objectives of ACEMIND, the activities planned and already implemented for achieving these objectives as well as the processes

### 2.1 Objectives

The dissemination activities aim to create awareness for ACEMIND’s research results in the European and global research community as well as among other stakeholders, e.g. the industry in the home networking area, and the interested public.

### 2.2 Activities

The dissemination activities of ACEMIND are designed so as to achieve the objectives described above in an effective way.

#### 2.2.1 Publications

##### 2.2.1.1 Website

The purpose of the website is to keep the public, the project participants, and the Celtic Plus informed about the project. The project website has a public part and a secure part for the consortium. It will also provide a deliverable portal, where people downloading project deliverables have to leave their address data.

The initial version of the website has to be discussed during the Aachen meeting. In a later phase of the project, an area for tutorial could be added to the website, as a means to support and accompany ACEMIND’s external participants.

##### 2.2.1.2 Leaflet

The first edition of the Project Leaflet, which was published in December 2013, aims to inform all interested audiences about the project and its main objectives and content. An updated edition of the leaflet will be published in the second half of the project, when a substantial amount of results is already available.

##### 2.2.1.3 Papers

ACEMIND will publish targeted scientific papers for selected journals and conferences. Published ACEMIND papers will be listed on the website.

#### 2.2.2 Events

ACEMIND is continuously monitoring opportunities for effective dissemination at relevant third-party events, including scientific/industry workshops and conferences. ACEMIND partners will be involved in targeted events via presentation, papers, and exhibitions.

#### 2.2.3 Relationships with relevant bodies and initiatives

ACEMIND is open to establish and maintain relationships to relevant bodies and initiatives whenever appropriate to add value to the dissemination of ACEMIND project results. ACEMIND has already started some activities in this area and will continue to grow them.

##### 2.2.3.1 Participation in Celtic-Plus Seminars

ACEMIND could participate to Celtic-Plus meeting to maintain mutually beneficial relationships with other projects in the area of the network of the future.

## 2.3 Processes

In order to manage the manifold dissemination activities of ACEMIND, the project has defined some processes for optimising the ratio between effort and impact.

### 2.3.1 Quality management

ACEMIND's dissemination activities adhere to high quality management standards. Dissemination processes are defined and documented in the Management Handbook, which is regularly monitored and updated, ensuring the effectiveness of dissemination measures.

### 2.3.2 Evaluation of effectiveness

The evaluation of the effectiveness of ACEMIND's dissemination activities includes:

- Analysis of web statistics.
- Analysis of success rate of paper submissions against defined targets.
- Quantitative and qualitative analysis of media coverage and requests by media and interested people.

## 3 Exploitation of project results

This part only describes the exploitation of project results including the use of foreground IPR. All IPR issues related to the project are governed by the consortium agreement (PCA).

### 3.1 Objectives

#### 3.1.1 Consortium objectives

The exploitation of the results is essential for the economic impact of ACEMIND's research. All involved manufacturers and operators are committed to the exploitation of the results for the planning of future communication systems and devices. The exploitation of the results has different objectives:

##### 3.1.1.1 General objectives

**Dissemination of ACEMIND technology as a global standard** – As a starting point, ACEMIND has identified standardisation bodies and associations that are relevant for the ACEMIND dissemination activities to establish the ACEMIND technology as a global standard (see section 3.2). It should be understood that this list of bodies is neither exhaustive nor fixed and will be constantly adapted during the project. It is therefore evident that this dissemination will be anticipated by setting up and adapting, thanks to a regular monitoring of these bodies, relevant work items, working groups, and associations. Partners of the ACEMIND consortium have already representation and key delegates in these standardisation bodies. More details on this approach will be captured in the ACEMIND standardisation plan (deliverable D5.2, due in month 5).

**File patents to protect and develop European industry interests in this area** – Patents will be filed to protect new ideas and paradigms before publication and serve European leadership in this context.

**Develop and market new product lines** – The objectives of ACEMIND are defined with a clear intention for exploitation of the research results by means of quick roll out of the ACEMIND technology. It is an explicit ambition of all industrial partners to put products based on ACEMIND technology into market. As the ACEMIND consortium consists of major European commercial players, exploitation through each partner's own organisation is the obvious and natural way to benefit from the results of the project.

##### 3.1.1.2 Objectives by partner type

**Network operators** – After successful completion of the research in ACEMIND, the operators in the consortium will roll out ACEMIND technology when available in their core business continents (Europe, Africa and South America) and develop new market opportunities in other regions. Additionally the ACEMIND technology will enable the deployment of new services (smart home on white goods) smoothly integrated with existing services and networks.

**Exploitation of results by manufacturers** – For manufacturers involved in ACEMIND, exploitation of the results of the project offers a key strategic opportunity for the longer-term development of their business, both in Europe and globally. ACEMIND will offer a demonstration platform for an early consensus building in the pre-

competitive domain in order to transform this investment and participation into a substantial commercial opportunity in the time frame beyond 2016.

**System and CPE vendors** – System and CPE vendors plan to manufacture equipment based on the results of ACEMIND. The joint realisation of the lab trials and the demonstrator planned in ACEMIND is an effective way of getting early feedback at the research stage of the product life cycle. This will allow a faster time-to-market of the new solutions assessed in the ACEMIND project.

**Universities and research institutes** – Universities will exploit the ACEMIND results through an increase in know-how and ability to support the European telecommunications industry. These organisations will be in a strong position to supply technical support and trained engineers to the European workforce in communications. The research centres within the consortium will create competencies to continue to support industrial partners and SMEs. Several academic partners have experience in the incubation of SME and will investigate opportunities with ACEMIND results.

### 3.1.2 Objectives of individual consortium partners

In addition to the common objectives, the individual ACEMIND consortium partners are working to achieve their own commercial or academic objectives:

#### 3.1.2.1 Operators

**P01 – Orange**, as a major European operator sees the ACEMIND technology as a key technology building block of its access network to penetrate more terminals. In the continuity of this rather mature business (beyond 10 million gateways sold, branded under Orange Livebox name), the intention is to roll out ACEMIND technology to improve network performance and user assistance solutions on existing but as well on new services and devices including smart home.

#### 3.1.2.2 Manufacturers

**P04 – Devolo**, as a leading European company on the market in Powerline communication solutions, targets to broaden its product spectrum with hybrid technologies. Basically, no products for self-organizing and energy-efficient hybrid home networks are currently available in the global markets, as they are being considered in this project. The offering of hybrid products and applications opens a new wide-ranging business and new customers. In view of the increasing public awareness of energy-saving technologies and the rising demand for home networking, the chances of success are considered to be very good. The results are not only for hardware integrators, chip and device manufacturers commercially relevant, but in particular for all companies in the field of home networking. The devolo AG plans, after the successful completion of the project, an extensive economic exploitation of the project results in all relevant areas of home networking by extending its product portfolio with full certification of the home networking technologies.

**P05 – Arçelik**, as one of the world's largest electrical appliances. The ACEMIND research will help Arçelik address the possible practical issues regarding the deployment of this range of connected products on the field, including security and convergence problems in networks built as a collection of devices with Wi-Fi or PLC connectivity. With the adaptation of the experience gained from the ACEMIND research to the mid-term projects, it will be possible for the company to design more thoroughly defined connected appliances and related software services and hence increase the energy efficiency of the products and the level of comfort delivered to the customers.

#### 3.1.2.3 Small and Medium-sized Enterprises

**P02 – OledComm** is an SME as a leading supplier of LiFi network interface devices enabling high speed wireless data communication and connected Led lighting network to the server, Oledcomm designs, produces and serves LiFi equipments in the telecom, datacom, personal electronics, and industrial markets. From LiFi hubs, PoE/LiFi routers, switches, PLC/LiFi adapters, LED drivers, network power supplies, DC-DC power supplies and to LED lightings, Oledcomm develops a world class LiFi solutions portfolio spanning from location based services to high speed wireless mobile connections. OledComm after the successful completion of the project will enrich existing and future products

**P07 – Invea-Tech** will use research results from ACEMIND project to strengthen its position as a recognised European network monitoring vendor. There is a huge potential (utmost importance) to introduce network-based monitoring, management and security aspects in local and residential networks. Most end users are not aware about various security threats they are facing in their home networks. The results from laboratory and living labs' tests and customer surveys will help INVEA-TECH to form business strategies for home network market. INVEA-TECH will integrate the ACEMIND results in their products and introduce new in its portfolio. Such

way INVEA-TECH will be able to extend its global cooperation with network operators towards dynamically growing home networking market."

#### *3.1.2.4 Universities and research institutes*

**P03 – IHP Microelectronics** will exploit the ACEMIND results academically through the annual summer school, lectures give at Universities in Berlin and the graduate school supporting PhD students at IHP. Furthermore, IHP will make the developed software available to project partners and market the developed IP. In addition to this, the developed protocol extension can be used and further enhanced for other applications such as cellular access networks and dynamic backhaul/fronthaul/access networks. Through a close cooperation with our partner devolo-AG, we will support their activities for commercial exploitation of the results and simultaneously make sure that no conflicts of interest in the dissemination and exploitation of the results occur.

**P06 – University of Athens** as academic institute and key R&D organisation in Greece will exploit the ACEMIND project, in different ways via post graduate studies and phd candidates working in the main objectives of the project. In addition innovate Business modelling approach will be developed and disseminated among the Academic and Industrial community.

## **3.2 Activities**

### **3.2.1 Standardisation**

To achieve wide exploitation of the ACEMIND project results, the consortium will actively contribute to standardisation in the relevant areas. Standardisation is key to achieve a global market for ACEMIND's home network. Among the standardisation bodies targeted by ACEMIND are, e.g., IEEE and may be ETSI. Details of the standardisation activities will be provided in the standardisation plan (D5.2).

### **3.2.2 Contributions to international organisations and research forums**

ACEMIND will contribute to international research organisations, forums and initiatives, e.g. via tutorial presentations and White Papers. Relevant bodies include Intelligent Environments, WWRF, Globecom or Digital Home World Summit and HomePlug Alliance. A detailed plan will be presented in D5.1.

## **3.3 Processes**

### **3.3.1 Management of IPR**

All IPR issues relevant to ACEMIND's project results are ruled by the consortium agreement (PCA).

### **3.3.2 Evaluation of effectiveness**

ACEMIND will establish an evaluation process that is meant to document the achievement of objectives in the exploitation of project results, e.g. in the area of standardisation. The evaluation process will be presented in more detail in the next update of this document (D5.1), which will be based, among others, on the standardisation plan (D5.2) and subsequent activities in the standardisation area.

## 4 Conclusion

The purpose of this document is to steer and control the dissemination and exploitation policy and activities of ACEMIND project. The document includes the possible dissemination of project results, the general and the consortium objectives as well as the proposed activities for ACEMING exploitation. It is necessary to communicate project result for the economic impact of ACEMIND's research.

This document will be regularly updated. The next major update is due in month 20. The final version will be available on month 36 including all publishing results.

## 5 References

- [1] <http://acemind.di.uoa.gr/>