



CANDELA

DELIVERABLE D3.5 – Exploitation Plan



CANDELA

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1 Introduction

This document describes the first release of the exploitation plan of the CANDELA project. It covers the basic initial ideas for exploitation of the project results planned by each partner.

The validation activity pursues the main objective of exploiting the results in the different markets in the participant countries.

1.1 Objectives

This document includes the CANDELA exploitation Plan. The goal is to be a baseline for the consortium strategy and a list of actions for exploiting the project and its results. This document is necessary to elaborate an adequate strategy to support the partners as much as possible in their exploitation activities and marketing plans in the future.

The purpose of the exploitation plan is to define a practical course of action in order to obtain a commercial return on the R&D investments made by all partners of the CANDELA consortium. This document contains the basic guidelines for that, and a specific action plan to succeed in the commercialization of the resulting products.

The exploitation strategy depends on the external market development as well as on the internal progress and on the results of the project.

1.2 Structure of the document

A first version of the documents describes the exploitation plan for CANDELA and the guidelines for the exploitation and business plans are also provided.

First of all, the consortium approach is addressed. A general introduction to the CANDELA consortium approach, its market and products and the marketing strategies for exploitation of the results and the tools and means to be used for the results is described.

After that, the individual exploitation plans of the consortium members are presented, stating how relevant the products resulting from CANDELA are in the context of their commercial and strategic interests.

The structure of this document is as follows:

Section I: addresses the common exploitation by the consortium approach. This is a general introduction to the CANDELA consortium approach, its markets and products, the marketing strategies for exploitation of the results.

Section II: deals with the individual exploitation plans of the consortium members, stating how relevant the products resulting from CANDELA are in the context of their companies and their possibilities. For these exploitation plans the following structure will be applied:

1. Business Objectives
2. Products and Services (research, no-exploitable and exploitable results)
3. The market
 - Segmentation,
 - Competition,



- Marketing strategy
 - Interest shown by prospective customers
4. Staff and management
 5. Financial forecasts

Although some of these parts will not be detailed until the final update of the Exploitation Plan.

In summary, in the Final Exploitation Plan that will be produced as a final result of the exploitation workpackage, different findings related to this project will be presented, included in the following chapters:

Report Chapter	In answer to...
Detailed product specification	Providing technical information on the final product
Correspondence between product and market need.	Answering to the question how the development fits with a market demand
Result positioning in the target market	To which domain will the consortium address marketing activities?
Customer profile	Who are our customers (industrial/services sector, company size, location...)?
Competitive analysis	Are there any competitive products? Compare them against our product.
Proposed product distribution strategy	Who will be the final product vendor (VARs, authorised Distributors, Direct sales...)?
Target markets	Which will be our market (size, number of units sold/year...)
Pricing policy (estimation)	Product price taking into consideration ROI, fair benefit and reasonable prices.
Target market share	Intended / feasible market share.
Training requirements of the end user.	Will any training requirement be needed from customers / end users?
Consultancy services need analysis.	Will any Consultancy services be needed for product implementation and who can be able to provide this service (profile).
Customer support services requirements	Post sales support service (maintenance, spare parts, versions, etc.)
Return of Investment Analysis (ROI)	When will be the investment paid back?
Legal strategy for partners and consortium	Consortium agreements.
Risk Analysis and contingency plan.	Risk Analysis.
List of partners and their responsibilities in exploitation	Partners involvement (commitment) in exploitation.
Analysis of remaining investment from RTD result to product	Is there any further investment in R&D needed?
Commercialisation strategy	How will the consortium commercialise the product?
Patents, trade marks, licensing.	Intended strategy on patents and licensing. Trade marks
IPR issues	Property rights negotiation.



CANDELA

In the present version of the Exploitation Plan, some of the above mentioned matters have already been addressed. Notwithstanding this, the different chapters will be improved as the technical project is being developed thus providing an updated input.



2 Synergy and Inter-relations of CANDELA Consortium

The CANDELA consortium is a well balanced group of partners covering different Exploitation and Dissemination paths.

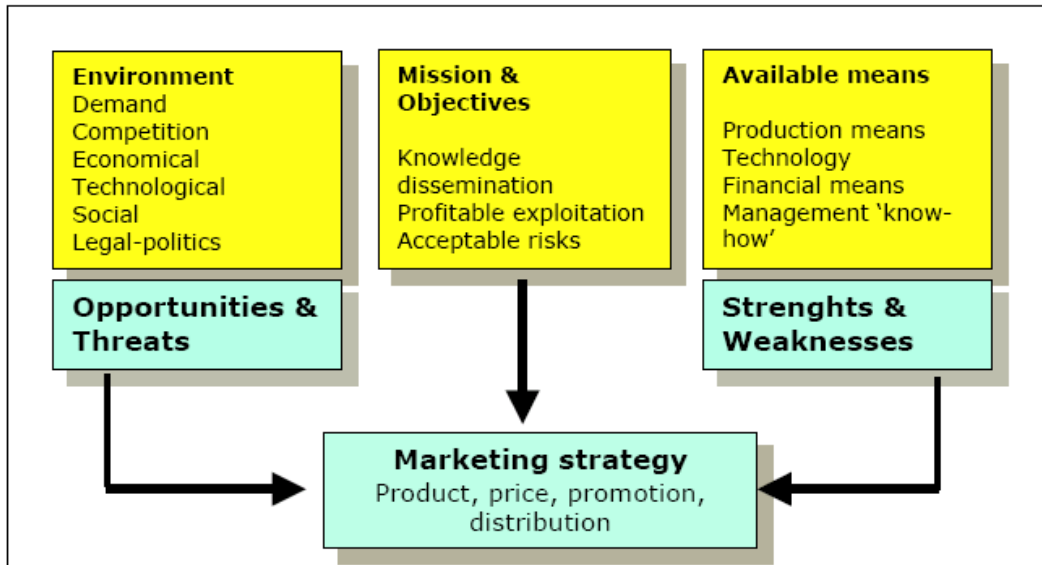
The CANDELA partners have different interests in exploiting the results of the project. These actions are complementary to each other and allow synergy for the individual return of investments:

- a) Ibermatica, as a software company, interested in:
 - having a competitive advantage to their competitors
 - offering their customers the development of the best solution to their needs
 - acquiring know-how to be used at consultancy level

- b) Amena and Microgenesis, interested in increasing revenues based on:
 - increasing the services offered
 - increasing openness or functionalities, for better positioning in the market
 - making their services compliant with evolving standards

3 Consortium-based Exploitation Approach

The consortium-based marketing strategy will follow from the SWOT (Strengths, Weaknesses, Opportunities & Threats) analysis and objectives. The consortium members will start to target the CANDELA products and services at the markets they already know. In this way they will make use of their strengths in the existing markets. After the stage of product development, the consortium member might consider to target new markets.



3.1 CANDELA products / services

At this final stage of the project, the consortium has identified several products and some other target activities that will form the CANDELA portfolio of exploitation products:

• **Independent software modules:**

There is a set of modules that can be exploited independently of (and, perhaps, better than) the whole system. These modules can be deployed in many different environments and for many different customers. Among them, the consortium has identified so far the following products:

- Automatic and manual MPEG-7 annotator: this is an independent tool that can be easily used in most of the content providers tools existing so far.
- Video exploitation toolkit: the whole set of tools dealing with the video management can be also isolated into a single product customizable for different markets. These tools will be mainly the video summary tool and the quality analysis tools.
- Personalization tools: the personalized delivery of multimedia assets will be also isolated and marketed in an independent way. This profiled delivery can be applied to different fields, from financial information to electronic news.
- Conversion tools: as new devices and transmission channels will evolve, information delivery will be more and more device-independent, and there will be an increasing need for products able to seamlessly convert the same content to different output formats and adapt these contents to channel bandwidth and other device-dependent conditions. Therefore, we have identified this product as another CANDELA exploitable result



The demonstrators developed within CANDELA will constitute a good example about how CANDELA products can be integrated to provide an integrated service to different customers. The final objective of this exploitation plan will be to identify potential markets for these products.

• **Consultancy services**

CANDELA is researching new fields of activity that will be very common in the next 2-3 years, but that currently are just starting to walk. Thus, there are very few companies or institutions dealing with MPEG-7 and -21 and using these contents to deliver multimedia assets through UMTS or GPRS services.

Therefore, we plan to offer our experience as an added-value that can be extracted from CANDELA and that could be easily deployed within other customers / areas. Specifically, we have planned

- To spread out the use of MPEG-7 and MPEG-21 based contents: our experience in this de facto standard will be a strong asset when they will be so extended as MP3 or MPEG-4 are today. The CANDELA consortium will be able to exploit this experience to define new products / services based on that, or the provide consultancy on that to other companies.
- To provide generic consultancy services over the CANDELA main fields: equally, the CANDELA consortium can use their experience to provide different consultancy services on video analysis / streaming, profiling, annotation or contents conversion. To do that, we have the objective to follow up standardisation bodies and certification organisms that will be able in the future to guarantee this kind of services.

The exploitation of these products and the cooperation to provide the services described above can only be done when a CANDELA Consortium Agreement will be signed by all the partners in order to rule the relationships between partners, the knowledge each partner is providing to the project and the results obtained in the own project.

3.2 Prospective markets

The CANDELA consortium, as we have explained, has complementary interests and are focused through specific market niches (as it will be explained in the individual exploitation plans).

However, there are new markets that will be considered during the lifetime of the project, in order to spread out as much as possible the market awareness about CANDELA and to analyse different possibilities to customise the project results in other areas.

For instance, a new market to be exploited by the CANDELA consortium will be the **Digital Rights Management** exploitation: as CANDELA will be able to store the owner's data on every digital item, it is very easy to seamless inform the different associations taking care of these rights that this digital item has been distributed, and even generate the billing and payment associated to this transmission. That would allow us to address a huge market all over the world.

Without any doubt, another opportunity to exploit CANDELA will rely on the **cultural digital heritage** (in Europe and outside). For them, it is extremely important to have safer ways to store, query / retrieve the contents, mark up the different distribution activities made over these contents, and have different information associated to these contents, enriching them and organizing over a complex distribution network (from PC to PDAs, mobile phones or any future devices).

4 Individual exploitation plans

Each industrial partner (that is Ibermatica, Microgenesis, Amena, ESI and Solid) is providing here their exploitation ideas, as well as a brief description of the company and their motivation to be in CANDELA.

Although these plans will be refined in further versions, an initial skeleton of the final exploitation ideas is here. The final version of each exploitation plan will include the information associated to this structure:

1. Brief company description
2. Business Objectives
3. Products and Services (research, no-exploitable and exploitable results)
4. The market
 - Segmentation,
 - Competition,
 - Marketing strategy
 - Interest shown by prospective customers
5. Staff and management
6. How to test the applications – description of external user groups (if any)
7. Financial forecasts
8. Exploitation activities done so far / scheduled for the near future

4.1 Microgenesis Producciones SL

4.1.1 Brief company description

Microgénesis Producciones is a company created in the spring of 1998, whose partners gather a large and fecund experience in the audiovisual and multimedia industries. They

- **produce** TV programs developing its **own formats**, using **digital** technology,
- **distribute** TV programs to the broadcasters and programmers throughout the world in all supports and media. (www.canalmicro.com),
- **netcast** in Internet (nettransmission) its own TV channel (www.canalmicro.com), and
- **license** all programs in every media, printed, or virtually supported at the whole market as home videos, video books, printed books, DVD, CD-Rom etc...

Microgénesis Producciones's strategy is based on three principles:

- **Digital** technology: from recording to postproduction, every program is produced, treated and stored in digital format. Every shot is aim to add value in every digital and printed media.
- **International** vocation: the programs are created with a global reach in mind.
- **Focus** its efforts in the creativity and quality aspects of the programs.

The catalog of Microgénesis Producciones includes the following series and programs:

- **SHORT FORMATS: "ONE MINUTE SHOWS"**
- **MEDIUM LENGTH PROGRAMS**
- **LONG PROGRAMS**
- **OTHER FORMATS**



This videos are presented without touching chroma or speed so the users can choose the best way to use them.

Since the beginning of 2000, Microgénesis Producciones provides full service for the television pages of the Spain's author's society, SGAE at their www.portalatino.com managed by the sDae (Digital society of authors and editors) from SGAE Group.

At their la tele latina pages we are currently offering three new short promos, three new musical videos and three new features every week.

Since November 2000 the streaming service is providing six channels on streaming on demand, with daily new programming and live streaming.

At this time, our see & enjoy collections are being broadcasted in more than 15 countries, from Canada, Colombia and Portugal, to Israel and South Korea.

4.1.2 Business objectives and addressed markets

Microgénesis Producciones will be able to offer to their clients the CANDELA tools and services.

Since the most important client is the Spain's author's society, to whom we provide thought their Portal Latino site, the production of latelelatina.com, we are planning to have as soon as possible a Beta test version of CANDELA.

The MPEG-7 encoding provides information on DRM and copyright owners that is essential for our client. This is one of the main fields where we will be benefited from the project outputs.

Latelelatina.com offers its programming through several different pages associated with sDae, having a link to open its viewer offering over one hour of new programming weekly.

This television system aimed **only to the Internet** keeps an archive that holds over 2000 short programs (around 3 mins. length) that could benefit from the CANDELA system.

The cultural reports and info pieces, musical videos and features offered by latelelatina.com implemented with CANDELA, could open a whole new market for sDae, providing all the information on the copyright owners of every audiovisual material.

With any doubts CANDELA will add value to the production we deliver to our clients and will be implementing the types of services we are currently providing.

Since Portal Latino is creating a **huge audiovisual database working in XML** will be an easy transition for them. The new viewer we just created for their streaming programming is actually working in XML and will adapt to the CANDELA system with any trouble.

Portal Latino is also working to create a commercial video distribution system on IP networks and the CANDELA features adjust perfectly to their costumer needs and profile.

Microgénesis Producciones provide video programming to other Internet portals and sites, as eresmas.com or estilísimo.com, which are carrying some of our one minute video recipes from the **see & enjoy** series in a pay per view basis.



CANDELA will add a perfect value for their users giving the opportunities of checking the videos before download as well as getting them to view in a hand held computer, a fridge Internet screen or even a mobile unit, just where they will need them.

On the field of tourism applications, our own format Cruising (a cam car continuous traveling shot) will benefit CANDELA since the system will be able to send video routes to mobile devices in the end user vehicle, showing them how to get to their destinations and showing the most important sites in the city.

In order to keep on exploiting CANDELA we, at Microgénesis Producciones believe that will be helpful to keep a consulting office that could check all the system applications and perform changes and updates in a continuous manner.

We also understand, from our five years experience uploading audiovisual programming and streaming, the four main video carriers (Real Networks, Windows Media Player, Quicktime and DivX) will appreciate the CANDELA advantages to implement their systems.

4.2 Ibermática, SA

4.2.1 Brief company description

Ibermática is one of the most active companies leading European R&D projects and applying state of the art Business and Technical Solutions in alliance with scientific and technological high level international partners.

Its main activity is based on Consultancy and Software Services. Their prime objectives are to adapt solutions to customer needs in the effective use of information systems acting as solution providers to our customers, which means delivering the best solution to their needs (in price, in functionality, in adaptability, in lead time, etc.) using the most open architectures that allows reusability for other project developments.

The experience gained in CANDELA will introduce Ibermática in the market of video analysis and delivery and which will make use of the emerging technologies like UMTS to be applied also in other sectors like Financials, Education and Training, and Internet Portal sites in general (Tourism, leisure, games...)

4.2.2 Products and Services

The main participation of Ibermática in the CANDELA project is concentrated on the personalization tools (which will be mainly developed by Ibermática) and the development of the demonstrators.

Ibermática will also get agreements with the CANDELA partners willing to participate in the future exploitation of the different CANDELA products in order to deploy into other sectors.

Thus, Ibermática will focus their exploitation plan according to the internal and external evaluation of the CANDELA demonstrator in three ways:

- Selling the personalization tools as a product ready to be integrated (through well-defined APIs) into other applications and / or sectors.
- Developing customized software solutions based on the CANDELA technology and tools.
- Leading a consultancy office where video streaming over UMTS can be offered to other customers



Ibermatica, as technology provider, will propose different possibilities to integrate, together with the other CANDELA partners, off-the-shelf applications specifically targeting the Spanish market.

For that, a Technology Implementation Plan will be provided at the end of the project in order to define the set of solutions that can be derived from the project and how the different partners should participate in the integration of these solutions.

4.2.3 Exploitation strategy

Within the CANDELA consortium, IBERMATICA is playing an important role for Exploitation activities, nevertheless, valuable input from all technological partners has been included in the consortium exploitation plan thus enabling an Europe wide co-ordinated exploitation action.

Exploitation strategy of Ibermatica focuses on the following main lines:

- Reaching partnerships agreements with:
 - CANDELA technological partners.
 - Emergent companies interested in exploit the upcoming UMTS market.
 - Content providers to sell CANDELA's based products and provide technical assistance.
- Developing solutions based on CANDELA technology and tools
- Selling consultancy services for insurance, healthcare and industrial organisations. Ibermatica will provide these kind of services, using its own commercial network.

Ibermatica is convinced that e-learning applications and tourism are not the only targets of CANDELA. In a second stage, Ibermática will address other market sectors like sports, games, or movies streaming, as well as the Digital Rights Management organisations where the CANDELA system can be applied.

On the other side, Ibermatica's current view of UMTS services is that this has to be a push technology. In other words: the market is not demanding new services, but the telecom operators have to demonstrate to the potential market the benefits of this technology. In this respect, Ibermatica is collaborating with Amena in defining and implementing other products which will be "pushed" to the market in order to generate the need of such product.

4.2.4 The Market

We feel that it is possible to spread out the different outcomes of the CANDELA project to other sectors, as the markets usually addressed by Ibermática: Finance, Assurance, Industry and services, Telecommunications, Public Administration, and Health Care.

The main contacts for Ibermatica are "large size firms" in these sectors. The objective is to reach most of these firms, as they require suitable services to provide personalized information to their own customers or their own workers (specially confidential and / or urgent information for directives).

4.2.5 Competition

There are other houses that could represent a competition for Ibermatica in the Spanish market. Some of them are the following:



Software houses: At present, our generic competitors developing software applications are large software houses operating in the Spanish market, such as Indra SSI, IECISA, Cap Gemini, SchlumbergerSema, Siemens Nixdorf and Software AG.

Telecommunication operators: although they are not direct competitors, the other UMTS licensed companies in Spain (Vodafone and Telefonica) are also looking for innovative services in the multimedia-based market. But this competition is also benefiting our purpose of 'pushing' the UMTS market with new needs not previously envisaged by the end users.

4.3 Amena

4.3.1 Brief company description

Retevisión Móvil, S.A. (brand name "Amena") is the operating company for a brand name of Spanish third mobile phone operator, a part of Grupo AUNA, the Spanish second fixed-line telecom operator.

Amena has national coverage since the commencement of its operation in January 1998. International coverage is guaranteed by more than 257 roaming agreements in 115 countries (August 2003).

Amena is known for its simple, distinct and innovative products and services. This approach is the reason for its 7.400.000 customer (August 2003).

Amena is involved in the implementation of new technologies and services specially those related to Internet, GPRS and UMTS. The investments in GSM and GPRS, at the end of the year 2002 were 2.007 millions of euros.

Amena is one of the UMTS licensed operators of Spain. On March 2000, AMENA was also awarded with one of the four UMTS Spanish licenses. Since then, they are committed to start UMTS services, and they are currently investigating on novel applications to be offered through this universal delivery system.

AMENA has guaranteed a minimum investment in excess of 386 billion ESP until the year 2008, and currently has a coverage of over 95% of the population. At the present time AMENA has over 700 employees.

AMENA uses the DCS 1800 technology, which offers considerable improvements over the GSM 900 one such as, increased voice quality and less network saturation due to a higher number of antennas, as well as increased battery duration due shorter phone to antenna distance, which also allows for a reduction in battery size and phone weight. Data transmission is also more favourable in this technology.

Currently, AMENA also offers a post paid service for small and medium-size companies, which includes first commercial SIM Tool-Kit based mobile information service in Spain.

4.3.2 Business objectives

The main interest of Amena in CANDELA is the development of new services that will complement the voice services already available to the customers. The new services are data services and multimedia services that should be personalised to the user preferences and the



terminals used. These new services will be a new source of income for the operator and simultaneously increase customer loyalty.

The slower-than-expected growing up of the UMTS network has originated that every telecom operator is looking for the 'killer application' that will boost the UMTS market, specially in Spain, where its difficult to increase the mobile phones market without changing the devices or the communication bandwidth provided so far.

Therefore, we are checking how to enhance with multimedia delivery one of the most successful services in Spain: the location-based tourism information.

AMENA believes the video services are the ones that can motivate the interest to the users and we are committed to promote it. AMENA has just launch video streaming services commercially.

4.3.3 Products and services

4.3.3.1 Antecedents of a Tourism Service deployed by Amena

Amena as third mobile phone operator in Spain, is very interested in delivering innovative and differentiate services to increase customer base and reduce churn.

Tourism is one of the most important contributors to the GDP of Spain. These considerations let Amena to launch an innovative service to guide people during Salamanca European Capital of Culture of 2002. Amena collaborates with Salamanca local authorities to launch the service in this city as a demonstrator of future deployments in other cities of Spain. Users can use a mobile phone, a PDA or a PC as terminal.

The service named "Salamanca Patrimonio Movil" (Salamanca Mobile Heritage) allows mobile telephone users to configure routes that take in monuments that they can follow through the city. It also allows the users to receive information about the main monuments on these routes and the points of interest they will find on the way within the city, such as souvenir shops, entertainment services, taxi and bus stops. The users can also choose to receive commercial offers via short messages (SMS) from the InfoArea service. The service also includes access to the full events calendar for Salamanca, with the extracts coming from "Ciudad Viva", the magazine created by the local government.



The "Patrimonio Móvil de Salamanca" provides the users with the ability to view street maps in their mobile telephones in order to find the way to a defined point, to main points of interest, alternative thematic routes, gastronomy, Spanish "tapas" bars, and fun!

Furthermore the service allows visitors to send electronic postcards of typical scenes from Salamanca using the new multimedia messaging service (MMS) that Amena launched in July 2002. Using the same MMS service, users can also participate in two digital photo contests: the "best digital photo of the day" and the "best digital photo of a hidden away spot found in Salamanca".

The service is accessed through different channels. Internet access to www.patrimoniomovil.com allows user to be registered in the service. Next figure shows the registration form.



The user can receive short messages describing a monument, also the user can receive monuments still images via MMS. The user can also download the “Patrimonio Movil” software to a PDA.

The service permits also to send the user alerts (short messages) regarding events scheduled for the following days: theatre plays, concerts, cinema, etc. The user sends a short message with his preference, for example “EVE TEA”, and the system will send him a list of the events related to theatre.

The Patrimonio Movil service interacts with the Amena mobile service called “¿Dónde?” (“Where?”). “Donde?” is a location based service that allows the user to be informed via short messages of nearest interesting places from pharmacies to ATM. To meet the requirements of “Patrimonio Movil”, “Donde? Service” was enhanced to allow inquiries regarding monuments and libraries of Salamanca, the first city where “Patrimonio Móvil” is deployed.

The “Patrimonio Movil” service fee is based on short messages and MMS traffic.

4.3.3.2 How CANDELA enhances the current Tourism Service

CANDELA user requirements and “Patrimonio Móvil” have several commonalities regarding business objectives and functional requirements.

The commonalities are relative to the kind of information to offer to the user and the events alerts.

But there are differences due CANDELA supports video contents that are not supported by “Patrimonio Móvil”. Current mobile terminals are not adequate to video playing. The new mobile phones to be available when CANDELA tourism service launch will support video playing in real-time with enough video quality.

CANDELA is an enhancement of the Patrimonio Movil Service already launched in Salamanca:



- CANDELA uses video contents and not only still images
- CANDELA implements some features related to video content management and digital rights management
- CANDELA is compliant to MPEG4, MPEG7 and is aware of MPEG21 evolution
- CANDELA personalisation features are more powerful to consider user preferences including behaviour based preferences
- CANDELA content labelling based on MPEG7

4.3.3.3 Current exploitation plan

Amena proposes the following alternatives for dissemination and exploitation of CANDELA results regarding Tourism service:

- Market study based on the customer satisfaction information related to the tourism services previously launched (i.e. Patrimonio Móvil). It is necessary to define the market for the new product in terms of its size, its state of development, the types of customers and the competitors
- Validate CANDELA by focus groups
- Present CANDELA demos to local and regional authorities of Spain
- Present CANDELA in fairs

Before launching video tourism service as a full service, it needs some adaptation and integration with Amena Enterprise Architecture for content provisioning, quality of service purposes and billing systems.

Once the product and the business model are defined, also the interfaces map should be defined. The interfaces map is the different interfaces with the other systems of the mobile operator, because the new service should interact with other systems like:

- Billing: The billing system is not the same if the user is going to pay a monthly fee that if the user pays for each time he or she uses the service.
- Customer Care: The user should have the feeling that his requirements are covered with the service that the operator has offered to him. In case these requirements change with time, the application should be modified if it is reasonable and / or strategic for the operator.

CANDELA launching is dependent of negotiations with local authorities (cities, regions).

Amena has agreements with content providers. Some of them have published some tourist guides of Spain cities that may be used as sources of textual information and photos.

4.4 Solid

4.4.1 Brief company description

Solid Information Technology Corp. delivers the premier autonomic data management platform. Built on a sophisticated architectural foundation, Solid's solutions power large-scale distributed applications in a variety of vertical markets, including the network infrastructure, digital home, mobile, telematics, process control, and the distributed enterprise. A unique combination of relational data management and advanced synchronization, Solid technology can be used as a



client/server data management system or be embedded into any network element - from today's wireless terminals and optical routers to tomorrow's smart devices.

Solid enables distributed data management through the Solid Smart Flow technology. The technology consists of a standards based relational database engine that you can put anywhere, from a server to a smart terminal device, allowing for data to be exchanged in a reliable, dynamic and programmable manner and to build high-performance, fault-tolerant, and scalable smart networks. Solid is a privately held company with worldwide regional offices in the U.S., Europe, and Japan. www.solidtech.com

4.4.2 Business objectives

Solid Information Technology as data management and data distribution platform provider will use its technology to produce modules and capabilities that will follow the CANDELA project. Those will mainly be realized with capabilities for content management systems and content delivery servers with special focus on high volume data and management of data on distributed architectures.

A new paradigm for home infotainment is emerging. Soon modern households will be equipped with a networked home gateway to mediate between in-home or portable devices and the Internet. This device will retain user preferences, collect demographics, and share content with the various in-home and portable infotainment devices.

Solving the digital home problem means solving a hard distributed data management problem. Huge volumes of three kinds of data flow across the digital home infrastructure: digital content, system control data, and the meta-data that describes and controls access to the content. Solid provides a distributed data management platform that can ensure that all three kinds of data take care of themselves. Solid protects and distributes the data, ensuring, for example, that billing information is tightly bound to content, protecting intellectual property rights.

Every consumer market suffers from unpredictable boom and bust cycles as consumers in the millions make decisions according to their preferences and needs. As you enter this market, you need systems that can be deployed fast on a small scale and then ramped up fast as demand surges. The Solid platform provides a scalable distributed architecture that solves this problem for you. You can start small and add systems easily to scale for increasing demand.

And because Solid systems are self-managing, you can accomplish all of this and still minimize the cost of operational overhead.

SOLID objective is to work on design and realisation of data management capabilities to provide needed video content and matadata distribution capabilities to enable data storage and data exchange from content producers to distribution servers and all the way to end users devices.

4.4.3 Products and Services

From Solid point of view Candela results and know-how gained are integrated either deeply into enhanced capabilities of Solid products or are implementes as easy to use modules or integration layers to third party components.

The Solid Autonomic Data Management Platform™ is a distributed and embedded data management solution designed to ensure that data in complex distributed applications takes care of itself. Solid provides you with a high-performance relational database management system (RDBMS) that can run on devices with limited RAM. It offers hot standby for carrier-grade



availability, and it gives you a way to automatically and reliably distribute data across a complex multi-node architecture.

It is designed specifically to address the data management issues of the distributed, highly available, complex systems seen in the network infrastructure, mobile telematics applications, and digital content delivery. Using the Solid Autonomic Data Management Platform, you can build applications that exhibit the autonomic behaviors of self-configuring, self-healing, self-optimizing, and self-repairing.

The Solid product suite is made up of a pair of data managers, tightly integrated with high availability and data distribution components. The entire platform requires minimal management intervention, fits into a compact memory footprint, and runs on a wide variety of operating systems -- enterprise, consumer-grade, carrier-grade, and real-time.

Solid SmartFlow Option can be used to move data between blades and their controllers and their element management system, or between vehicles and various base stations, or between in-home media gateways and media repositories. Solid SmartFlow is also optimized to move large media objects, and offers the same speed as FTP.

4.4.4 Exploitation strategy

Through CANDELA, focus will be on video content including middleware service layers, home media servers and mobile devices and surveillance system domains.

Solid is targeting to open new business on digital content markets and there are currently several opportunities revealed.

Usage of CANDELA results is dependent of customer interest and partnering opportunities with key vendors and solution integrators. However we have seen a lot of interest for CANDELA approach and proposed exploitation steps are:

- Present CANDELA ideas to potential customers through demonstrators integrating data management and delivery capabilities
- Develop beta implementation including key building blocks to realize e2e content delivery and video content management capabilities
- Work out key partnerships within different value chain players: Content providers, Solution integrators, Service operators, Device manufacturers.
- See opportunities to work with CANDELA partners to build up joint offerings
- Present CANDELA ideas and demos on commercial shows and exhibitions.