PROJECT RESULTS

News on mobile e-paper terminals

Developing a complete digital newspaper infrastructure

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News for everybody, anywhere and at any time

The DigiNews project specified, designed and demonstrated a global publisher-to-reader solution for digital newspapers. A digital newspaper is prepared with sophisticated electronic publishing tools in a time-critical environment. It is distributed to the subscriber via a broadcasting medium such as radio or television, over the Internet or using future 3G mobile networks. Use is designed to be very simple and it can be read on thin low-power lightweight wireless electronic terminals.

All aspects of our daily lives are becoming digital. After telephony, music, films and photography, the newspaper is an excellent candidate to enter the digital world as:

- The current use model of the newspaper – daily distribution, read and throw away – can be reproduced easily by an electronic equivalent;
- The digital newspaper offers many new service opportunities to attract early adopters: up-to-the minute stock market information and breaking news, worldwide access, personalised information, selectable font size, speaking newspaper for use in the car…;
- All the technologies needed to build an attractive product will be available at short term – until now, flexible displays were the only missing technology;
- The digital newspaper infra-structure can be built on current communications networks, avoiding high deployment cost and enabling a fast deployment;
- Embryonic solutions such as PDF distribution already exist, showing the market interest; and
- The low cost of electronic distribution compared with physical transport of the classical newspaper indicates the electronic version should be cheaper in the long term or for intensive use. This should thus benefit and motivate the users.
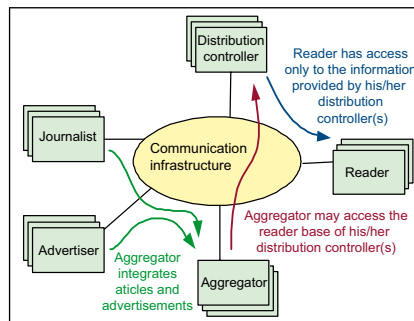
A newspaper distribution system

A solution for everybody
DigiNews looked much further than the current PDF or HTML offerings distributed over the Internet; it targeted a solution acceptable to everybody, fully exploiting the potential of an electronic format and leading to complete replacement of traditional newspapers within 20 years.

DIGINEWS (ITEA 03015)

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Partners
Concentra Media
dZine
Fraunhofer FIRST
Halmstad University
Ibermatica
KTH – Royal Institute of Technology
K.U.Leuven
LeMonde.fr
Philips Innovative Technology Solutions
Robotiker
De Telegraaf
TU (The Swedish Newspaper Publishers Association)

Countries involved
Belgium
France
Germany
The Netherlands
Spain
Sweden

Start of the project
February 2004

End of the project
June 2006

PROJECT RESULTS

Two complementary approaches were followed:

1. A *theoretical top-down approach* resulted in the definition of an extensive list of requirements and an abstract and technology-agnostic architectural framework taking account of:
   - The user point-of-view, based on readers, publishers or advertisers scenarios;
   - The business point-of-view, requiring a flexible solution enabling implementation of the various identified business models;
   - The technology point-of-view, proposing a digital newspaper built on the current distribution infrastructure for digital information and on current trends in data representation.

2. A *practical bottom-up approach* started from the contribution of the various partners and leading to demonstrators that fit within the architectural framework. These include various options for user interface and newspaper navigation – validated by extensive user tests – and solutions for an XML-based data structure, for newspaper data encapsulation and transport over IP and broadcast networks, for secure transport, for newspaper personalisation….
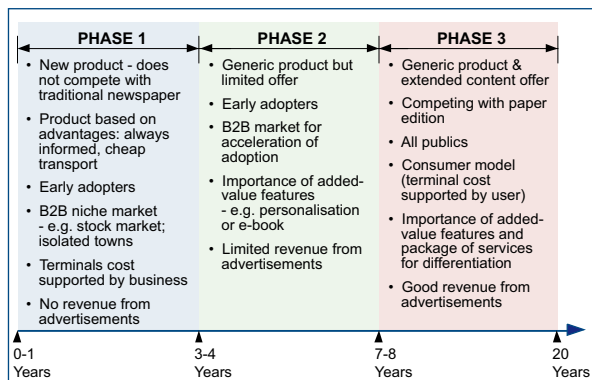
structure provider… – will support its cost, incorporating it into the price of a service subscription; later, when the service offer will be broad, the end user will support the cost;
- Value is in the service and not in the hardware; some manufacturers may be interested in contributing to the service package – and getting remunerated for it;
- Advertisers are not interested in early adopters markets that are too small to be profitable. At product introduction, no revenue can be expected from advertising and initial targets will be niche markets conscious of the added value of a digital edition and distribution.

Two solutions demonstrated

Two solutions were demonstrated for distribution of the digital newspaper, based on portable lightweight and paper-like terminals, and using existing communications infrastructure: one solution is based on a digital broadcast channel, the other is based on the Internet. The demonstrators include solutions for an effective user interface, personalisation and digital rights management.

Various reports presenting the architectural framework and the technical concepts developed have been completed as well as a report proposing various business models and a roadmap for the introduction of the digital newspaper into the marketplace.

PHASE 1	PHASE 2	PHASE 3
• New product - does not compete with traditional newspaper	• Generic product but limited offer	• Generic product & extended content offer
• Product based on advantages: always informed, cheap transport	• Early adopters	• Competing with paper edition
• Early adopters	• B2B market for acceleration of adoption	• All publics
• B2B niche market - e.g. stock market; isolated towns	• Importance of added-value features - e.g. personalisation or e-book	• Consumer model (terminal cost supported by user)
• Terminals cost supported by business	• Limited revenue from advertisements	• Importance of added-value features and package of services for differentiation
• No revenue from advertisements		• Good revenue from advertisements
0-1 Years	3-4 Years	7-8 Years	20 Years

Three-phase introduction

Introduction was proposed in three phases, taking account of the following key issues:
- A traditional newspaper is bought with its paper support. A digital newspaper needs an electronic support. A key question is who will pay for the user terminal. In the first phase, a business actor – content provider, infra-

Major project outcomes

Dissemination
- Eight publications
- Seventeen presentations at conferences/fairs
- One television interview
- Eight theses

Exploitation
- Three new products: two terminals and one distribution server
- Three new services: a personalisation module, a security solution and a solution for newspapers

Spin-offs
- Irex Technologies (Philips spin-off)