



2008-2011



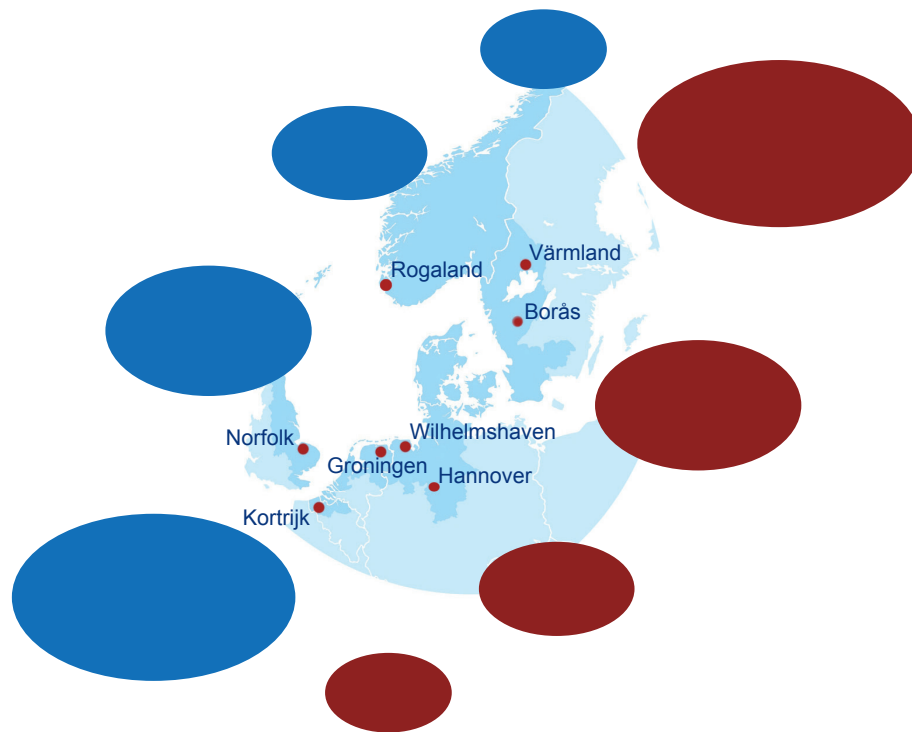
EUROPEAN UNION
European Regional
Development Fund

The Interreg IVB
North Sea Region
Programme





**A connected ring of
European
Collaborative
Innovation
Centres**





To work with the innovation project E-CLIC, within the Interreg IVB North Sea Region Programme, has been a fantastic journey.

We started in 2008, with the establishment of eight regional innovation centers across the North Sea Region, and we have then worked together during three years with our various work package activities, both within the E-CLIC centers and between the E-CLIC centers. We have built up living labs as part of a number of our centers and an incubator as part of one of the centres. The partners have given lectures to each other, organized student exchanges, workshops and conferences. In addition, we have carried out some 60 case studies, and developed a number of prototypes and media productions. We have also tested our prototypes, looking at business models and developed the "Next Generation E-CLIC Model".

I would like to thank all the E-CLIC partners and everybody across Europe who has been involved in the E-CLIC project in one way or another. It has been a very enjoyable and rewarding time, and I really want everybody to know that it has been a pleasure to be project manager for a project with such great partners.

Katarina Nordmark
E-CLIC Project Manager



E-CLIC Kick-off, Norwich 2008



E-CLIC Last project meeting before the final conference , Stavanger 2011



How it All Began

Over the last three years E-CLIC has brought together 16 partners from five Member States and Norway. Together they form a connective ring of eight European Collaborative Innovation Centres, which are located in the North Sea Region.

The E-CLIC idea started with a project called BIRD. It was about broadband access for innovation and regional development. That was about bringing into the picture what broadband access is, and what it can lead to in terms of regional development.

During the BIRD project, the partners saw that the infrastructure was in fact in place around the North Sea with high capacity, but there had been no new industry or very little coming out as a consequence of that new infrastructure.

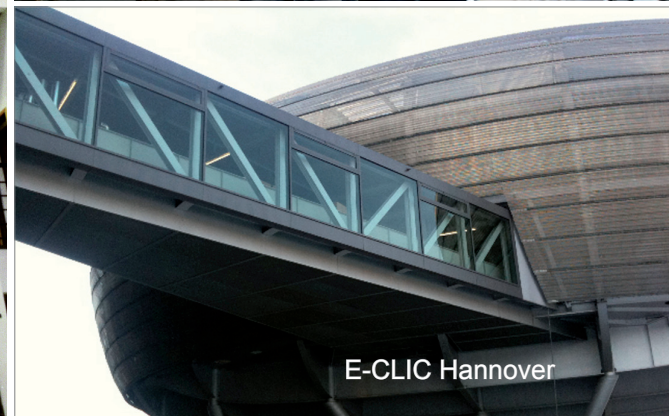
The question came up about what to do with all this broadband access? Now it's

time to develop services and products, and that is the basic idea of the E-CLIC project.

The partners wanted to be part of that development and wanted to increase that development to new companies and new kind of industries.

And here, especially within the area of ICT, the youth have the future and the youth are the basis for the development of new ideas. That is why the BIRD partners attracted partners who were connected to the universities; because the university environment is the base for all the projects in E-CLIC.

The aim of E-CLIC was, and still is, to bring students together with their different talents and fresh ideas, and let them work together with businesses on new innovative ideas.





Eight E-CLIC Centres

Within the framework of the E-CLIC project, each partner established a European Collaborative Innovation Centre with the aim to provide a meeting point for universities, research institutes, public authorities and SMEs, thus serving as a platform for innovation in broadband media services. The project also enhanced transnational partnerships and cooperation within and between centres.

E-CLIC Värmland, Sweden, promotes innovation by running innovative and business driven research and development projects. The main focus within the centre is on mobile media services, broadband infrastructure for new media services and service development, and enhanced methods and processes for quality assurance. Located at Karlstad University, the centre offers a LivingLab with advanced wireless broadband networking technology and provides a place where people can be involved in tests of new prototypes in a natural working environment.

Within E-CLIC Borås, Sweden, research, business entrepreneurship, systems development and management are combined into one laboratory (InnovationLab), serving the system development needs within Academic Computing. The centre

provides researchers and research groups with the tools and know-how to produce artefacts in support of their research. Research results can be transferred into an application for validating purposes, into a pilot-stage for multi-user testing or even into full production.

E-CLIC Hannover, Germany, is called LivingLab, and stands for thinking and rethinking, changes and opportunities of the digital revolution concerning the future of media. Education, research and development for the media world of tomorrow are the key areas the centre is focusing on. The centre offers technical facilities for a multifunctional utilization in education, events, discussion panels and video conferences.

For E-CLIC Wilhelmshaven, Germany, the key focus area, beside researching the possibilities of Second Life and other similar platforms, is how broadband access possibilities can contribute to the enhancement of eGovernment, Astronautics and Destination Management.





The main point of interest of E-CLIC Groningen, The Netherlands, cooperating with business companies, health care and educational institutions and the public administration, is to improve e-services for the citizens of the region. They are also active in extending the wireless broadband network to the whole city while carrying out research on further development of wireless city networks.

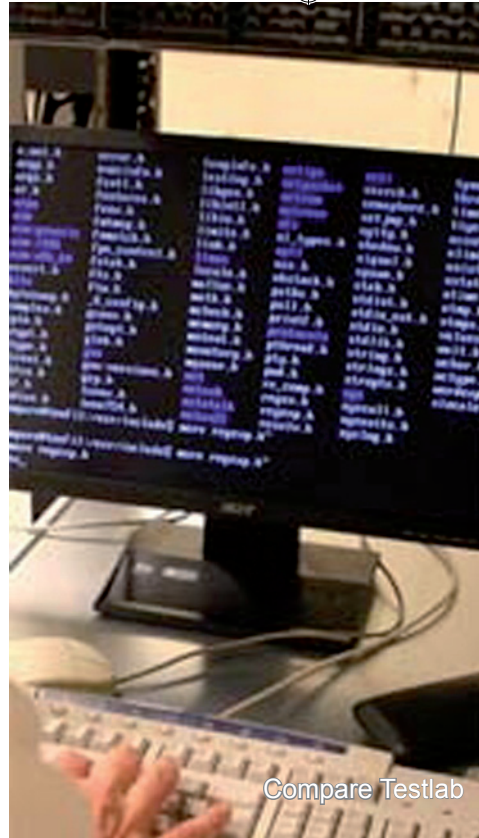
E-CLIC Kortrijk, Belgium, called The Studios, is a business accelerator, a meeting point for creative minds from the fields of industrial product design, new media and communication technology and digital arts and entertainment, offering fully-equipped offices, meeting rooms, seminar space brainstorming gardens, parking areas, a lively kitchen and even a basketball court. The centre is available for rent for external companies and organizations, but also offers monthly info sessions, debates, panel discussions, presentations, events and activities, all open to the public.

E-CLIC Norfolk, UK is a centre for the development of new and innovative digital ICT, broadband and media services. It is also home to a number of education and training courses; making state-of-the-art High Definition broadcast production facilities available to all. In addition, the centre provides incubation space to a number of new innovative digital ICT companies, with a view to supporting exciting collaborative projects.

The main area of research of E-CLIC Rogaland, Norway has been researching new broadband technologies with special focus on enhancing e-learning. This included research on podcasting and webcast systems, the development of BA courses for nurse education utilising modern media technology and also archiving older media material to make it available for researchers all over the world.



E-CLIC Roadtrip



Compare Testlab



Wireless Groningen



Case Studies

The eight E-CLIC centres have had a number of work package projects running through out the project. The projects – both regional and transnational – have led to case studies, prototypes and media productions. On the following pages we would like to take you on a case study trip. Each centre has been given the opportunity to pick two case studies out of the around 60 we have in total.



Compare
COMPETENCE AREA ICT ●



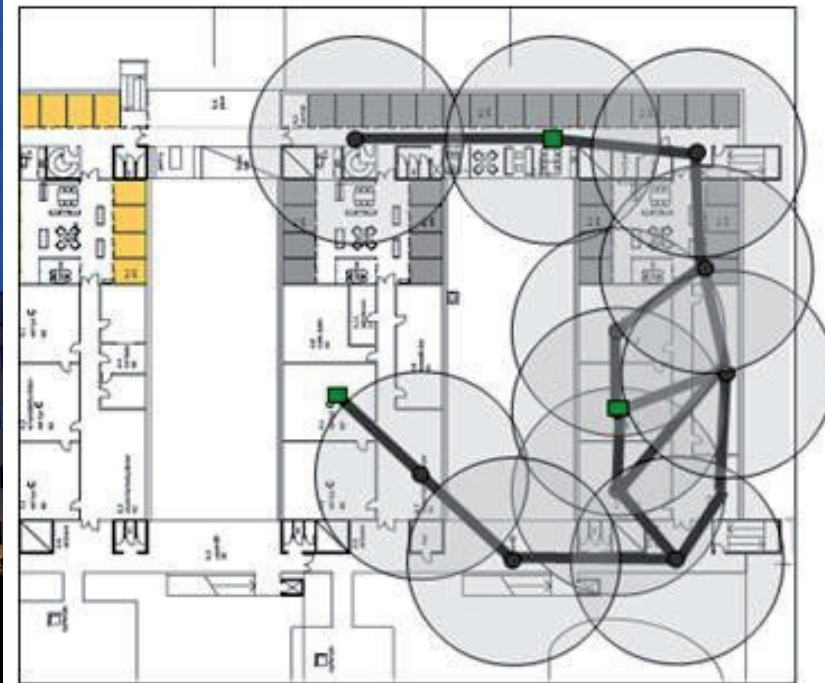
Länsstyrelsen
Värmland





VÄRMILAND







VoIP in Wireless Mesh Networks

Wireless Mesh Networks (WMNs) are a promising technology for providing cost-efficient and flexible wireless Internet access. Recently, WMNs have attracted a lot of attention from both academia and industry and are an important part of the wireless internet of the future.

In some cases though, we experience poor performance in WMNs when using real-time applications such as on-line gaming or Voice over IP (VoIP). The research question addressed within E-CLIC: Can we increase the VoIP capacity of Wireless Mesh Networks?

In this case study, we evaluate in detail the performance of IP packet aggregation in a real wireless mesh testbed. In addition, we evaluate the achievable user quality of experience.

The conclusion of the case study is that packet aggregation does improve VoIP performance!

Case Study Abstract

Wireless Mesh Networks (WMNs) are wireless multihop networks comprised of mesh routers, which relay traffic on behalf of clients and other nodes. Using the standard IEEE 802.11 distributed coordination function (DCF) as MAC layer, a node needs to contend for the medium each time it wants to transmit a packet. This creates high overhead in particular for small packets and leads to poor performance for real-time applications such as VoIP or online gaming. Burst packet transmission can increase the efficiency. For example, with the Transmission Opportunity limit (TXOP_{limit}) in IEEE 802.11e, a station may transfer several packets without contending for the channel in between. Similarly, IP packet aggregation combines several IP packets together and sends them as one MAC Service Data Unit. Originally, both schemes have been developed for singlehop networks only. Thus the impact on WMNs is unclear if the packets need to contend over multiple hops. In this paper, we use measurements from a 9-node WMN testbed to compare TXOPs and IP packet aggregation for VoIP in terms of fairness, network capacity and quality of user experience. We show that for low networks loads, both TXOPs and IP packet aggregation increase the VoIP quality compared to IEEE 802.11 DCF. However, in highly loaded networks IP packet aggregation outperforms the other schemes.

Case study executed by: Karlstad University



Student project – TRACS – Test Results and Configuration System



E-CLIC Mid-term Conference, Hannover 2010



VoIP Solution from Germany

One of the tests that Compare have conducted in the E-CLIC project has been about Secure Voice over IP.

Making telephone calls via the Internet has gradually outcompeted the old analog telephone system. One crucial aspect, however, with phone calls via Internet Protocoll is about security. To find secure solutions is a highly prioritized area. One application has been developed by the E-CLIC partner Jade Hochschule in Wilhemshafen.

Their product Secure VoIP (SecVoip) is a IP telephony solution, run by The Laboratory for Communication Networks & Transmission Technologies, makes it possible to

securely communicate through the Internet (VoIP) without a chance for eavesdroppers.

The tests have been conducted at Compare Testlab, who have the technical infrastructure, with the resources and skills to support the Compare companies.

The tests were carried out by Qamcom Research & Technology, one of the member companies. The test was set up in February 2011 when Kai-Christian Struss and Benjamin Zerrath from Jade Hochschule visited Compare Test lab.

- An interesting and exciting project where we have learnt a lot, explains Sven Wedemalm who is responsible for Compare Testlab. The tests were carried out remotely and gave several important results for Jade Hochschule. For a more complete test the software however needs to be installed locally at the Test-lab.

Case study executed by: Compare Testlab



UNIVERSITY OF BORÅS
SCIENCE FOR THE PROFESSIONS



Ladokenheten





BORAS





Borås University



Borås University





e-Power to the People

The project e-Power to the People - a Driver for Cross Sector Regional Development in Europe/Citizen Centric Public Service in Sparsely Populated Areas (ISSI) has the aim to develop e-services focusing on the needs of the citizens, enterprises and public authorities. It also aims to provide higher quality of life for the citizens and to strengthen regional attractiveness of the Municipality of Örnköldsvik, Sweden.

In order to better understand the needs of all the interested parties, the so-called Co-Design methodology was used for defining e-services that would be useful for citizens and/or SMEs. The Co-Design Innovation Process meant bringing together into workshops all the key actors and stakeholders with different levels of digital competencies, then channel in and process the various ideas and experience they had.

As a result, an e-service model in the form of an on-line community was created (InneLandet - www.innelandet.se) – a virtual meeting place for citizens and businesses.

As a part of InneLandet, the Future Village School project is up and running: small learning environments where teachers and pupils test open-source platforms and e-services to enhance their knowledge and their cooperational skills. Also, a virtual mall was set up, where users/customers can shop in several stores, with the payment being automatically split between the separate stores. This can be further developed by adding other public and private services to the site.

The case studie e-Power to the People is the result of a collaboration between E-CLIC and the national project Innelandet, funded by Innova.

Case study executed by: Borås University





Integration of web 2.0 and Science 2.0 in eService development - e-Me

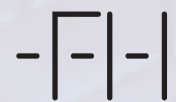
One of the strongest trends in the ICT field of today is e-empowerment of different kinds of clients, such as citizens, consumers and companies. This means that more emphasis is put on the possibility for clients to manage and contribute to the information society – both in terms of services and of using and supplying content. Web 2.0 is a concept that puts emphasis on participation and co-production of data and services with a focus on elaborate internet applications, user-generated content and services, social networking and open standards.

The e-Me project is targeted towards user-driven service development in a close collaboration between; citizens, public authorities, municipalities, SMEs and R&D focusing on the involvement of young people in the creation of next generation e-services. The goal is to make it easier for the individual, through innovative e-

services, to find useful, correct and updated information and to simplify necessary communication and interaction between the citizen and public authorities.

The project, running since October 2008, is aiming at improved relations between individuals and public authorities through the implementation of a new service model based on social media in the form of an on-line community. The final vision is an agent-driven societal service model, an e-Me, comprising different e-services and a virtual electronic servant, with a unique identity and a customized, personalized setup. The agent ensures that instead of the individual chasing information and services over the internet or other communication systems, public authorities and organizations must meet and interact with the citizen in this new community-based service model and meeting place.

Case study executed by: Borås University



Fachhochschule Hannover
University of Applied Sciences and Arts

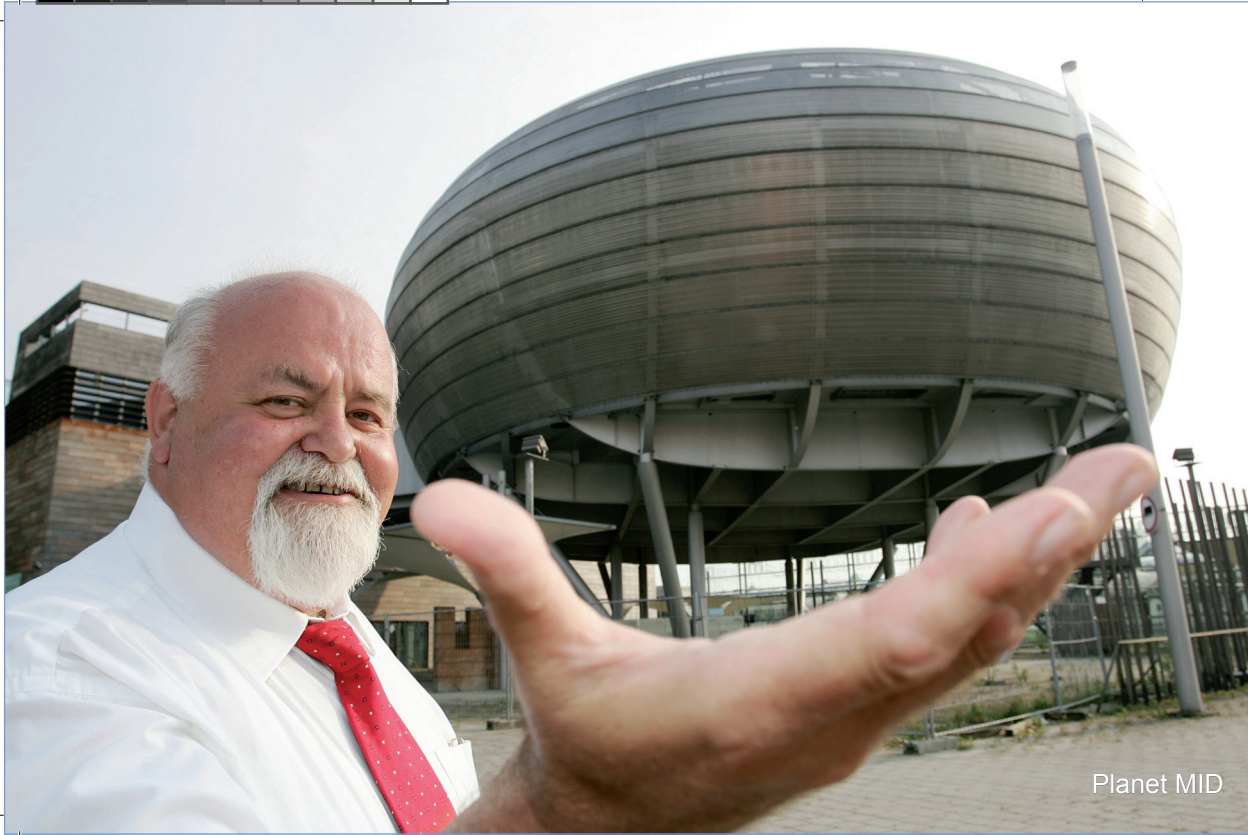
INITI@TIVE **D²¹**



The background of the page is a light blue image featuring a faint world map and several silhouettes of people standing in a line, suggesting a global or international theme.

HANNOVER





Planet MID



E-CLIC Mid-term Conference, Hannover 2009



Virtual Reality for Collaboration and E-Learning - Planet MID in Second Life

In today's world, online communities take a huge part in the communication between remote actors. This multimodal interaction and cooperation can be supported effectively using 2D and 3D internet environments.

Within the framework of the project, a 3D simulation environment – a virtual world called Planet MID owned by the University of Applied Sciences and Arts, Hannover in a Second Life software environment – was created for students and faculty members to meet, communicate and interact. Synchronous interaction takes place in the 3D virtual planet, where avatars representing their owners come

together to chat – with written text being visible to avatars nearby –, to speak with the use of a headset, and to interact with the environment collaboratively. In this virtual world various forms of interactive communication are possible: users can interact one-on-one, one-many and many-many with the ability to create and modify objects. For the support of the 3D virtual world, for asynchronous interaction and text-intensive tasks a 2D website was created with simple-to-use tools like forums, wikis, shared bookmarks, which allows working groups to be set up and work together on a common task.

Case study executed by: University of Applied Sciences and Arts



Eye-tracking system for a usability test



Eye-tracking demonstration



Usability and User Experience of www.seniorenberatung-hannover.de

Internet use and ICT literacy of the elderly has increased considerably in Germany during recent years. The Municipal Service Senior Citizens of Hannover operates an information and advice portal for senior citizens on the Internet to inform about issues of central interest to them. In order to make the platform more user-friendly, 30 subjects divided into two age groups (age group 1 between 40 and 59 and 2 above 60) were put to a 3-step test: first filling in a questionnaire to establish the subject's general knowledge of internet, and awareness and expectations of the portal, followed by examining subjects performing given tasks while using the website for the first time and finally having them fill in another questionnaire about user satisfaction of the portal.

In step 2, a non-contact eye-tracking instrument was used, a device that helps to identify the user's eye movements, their duration, retention time etc. The multi-method approach of examination included “scan-path” – where the path of the eye movement on the webpage is illustrated by a line connecting points, bigger points representing longer retention time, “focus-map” – where eye fixations on the webpage are depicted with brighter areas in a darkened background, and “heat-map” – where eye fixations on the webpage are shown in the style of a thermographic image.

The study helped to define the most relevant pieces of information for the target group and their best possible placement on the website as well, based on the subjects' eye movements while using the webpage.

Case study executed by: University of Applied Sciences and Arts



JADEHOCHSCHULE

Wilhelmshaven Oldenburg Elsfleth





WILHELMSHAVEN





E-CLIC project meeting, Groningen 2011



Jade Hochschule study visit at Compare Testlab



Broadband via Ethernet

The Ethernet protocol is a computer network technology for local area networks based on frames. It is the most popular protocol for networks in enterprises and it is easy to implement, to maintain and is very flexible. The Ethernet frames can be regarded as carrier services.

Metro Ethernet is forging ahead. Ethernet is often said to provide the “lowest cost per bit“. The terminal equipment’s are nearly everywhere available; most personal computers own an Ethernet interface and most industrial buildings are wired convenient.

In Germany, the companies Colt and Deutsche Telekom already have in their portfolio products which are based on metro Ethernet. In the past, new techniques often had to be used by potent firms first and the end customers received the new technology step by step (DSL for instance). The Ethernet technology is sophisticated; standardized products are on the market and in use.

Not only companies are potential customers, the end-user also wants to take fast

data and voice communication into use. VoIP, online gaming, video on demand in high definition quality and a fast approach to information are on demand by the customer.

However, Ethernet has to be further developed concerning scalability, service management, standardised services and quality of service and reliability. In addition to the well-known functions of local area networks (LAN), Ethernet will fulfil essential tasks in Metropolitan Area Networks (MAN) and Wide Area Networks (WAN). The user will be offered all functionalities of Ethernet services without caring about the carrier networks. If parts of the network consist, for instance, of Synchronous Digital Hierarchy (SDH) or/and MPLS full functionality will be maintained for the user.

It seems to be a question of time, when households receive Internet access via Ethernet.

Case study executed by: Jade Hochschule



Student exchange - Borås - Wilhelmshaven



E-CLIC project meeting, Stavanger 2011



Pilot Survey on Location Based Services, Mobile Websites and Applications

Mobile services have expanded significantly in the past few years. In 2010, there were more than 5 billion mobile contracts in the world and predictions for 2011 say that the market would grow again by 10 per cent. This in large parts is due to modern smartphones with applications that offer a whole new variety of opportunities and the spread of mobile internet.

The change in the mobile market brings both possibilities and chances, among others for the tourism sector.

A pilot online survey in December 2010 with 300 participants from Germany was conducted in order to try to define the future of ICT in the tourism sector, focusing on the subjects' preferences when it comes to a choice between mobile applications and mobile websites, and their experience and opinion about location based services (LBS – a mobile service, that allows travellers to receive useful information matching their location based on GPS information gained from their mobile phones). The aim of the

survey was to predict future developments of ICT that may develop the tourism sector.

Findings and conclusion of the pilot survey are that an increasing numbers of travellers have smartphones and use them for travel purposes, it is therefore essential for destinations to be available on mobile phones. Since customers have no real preference for either mobile websites or mobile applications and both have advantages and disadvantages, no ultimate conclusion on which option to choose can be reached. The decision for one or the other remains a matter of taste. Location based services are one of the most important services for destinations. Ideally, all service providers, hotels, restaurants and points of interests should work together with the destination to offer travellers the best user experience possible through location based services. With more offers and options the number of users is bound to increase.

The pilot survey is planned to be followed by a more representative one with 3 000 participants.

Case study executed by: Jade Hochschule



**university of
 groningen**

faculty of economics
and business



Hanze
University of Applied Sciences
Groningen

GN·X





GRONINGEN





Scanning lady



Team E-CLIC Groningen



Tripple Helix



Business Process Innovation with QR Codes

This case study is about innovative business processes in the Dutch Archaeological Museum “Hunebed Centre” (megalithic tomb, or dolmen centre) in the Province of Drenthe. As one would expect, significant parts of this museum are open air, thus visitors need guiding information while walking around to watch the individual pieces of the exhibition. The objective of the Hunebed Centre is to create a richer visitor experience by using new mobile AR solutions. Under the lead of Dr. Marco Stuit students of the University of Groningen, faculty of economics and business, investigated the potential use of new mobile augmented reality solutions to enrich the visitor experience at the museum. After documenting the current visitor process

with BPMN (Business Process Modelling Notation), different solutions were discussed.. Based on existing applications and after consultations with key persons from the Hunebed Centre, three popular mobile AR were reviewed: Layar, 7scenes, and QR codes.

The latter were selected as the best solution alternative, the desired visitor process is documented with BPMN. In this improved process model, the visitor process has been redesigned to integrate QR codes. Several QR codes have been implemented at the Hunebed Centre. Post-implementation visitor shadowing shows that they effectively fulfil their purpose.

Case study executed by: University of Groningen



E-CLIC meeting , Groningen 2011



E-CLIC Mid-term, Hannover 2010



Effects of Active Promotion on Web traffic

It is common knowledge nowadays that with the rapid expansion of ICT and modern media, businesses and companies have to make themselves visible “out there” on the world market in order to reach their audiences. But how much do we know about what needs to be done in order to attract attention to a website among thousands or even millions of similar ones?

A team of students from Hanze University created a supporting mobile website to a one-week long fundraising activity that took place in the city of Groningen, and undertook a series of promotional activities before and during the activity including tv and radio interviews, paper-based and online articles and twitters, to draw attention both to the fundraising and the mobile website.

Analyzing the recorded traffic statistics of the website showed that the traffic collapsed as soon as the site was no longer actively advertised. As a conclusion we can state with certainty that the number of visits to an unknown website is very dependent on the publicity and the promotion. Detailed analysis of the data showed that the number of hits was very much in line with the promotional activities undertaken. When you translate this outcome to new commercial websites and websites of start-up companies this means that besides bringing a good and user friendly website into the air it is necessary to continuously promote and advertise it over a long period of time, until the brand is established enough.

Case study executed by:
Hanze University of Applied Sciences, School of Computer Science



howest

De Hogeschool West-Vlaanderen

Lid van de Associatie Universiteit Gent





KORTRIJK



The Studios



E-CLIC meeting, Stavanger 2011



Multi Mania, Kortrijk 2009



Multimania – International Entrepreneurs Forum

Each May, The Studios at Howest Entrepreneurship Forum educates and enlightens people on how to foster the entrepreneurial spirit within students, schools and businesses. The Forum features stories about the ups and downs of starting business and different approaches to brand-building on and offline. Recent talks have ranged from an online network of offline mobile desks to offline mobile video machines that bring events online. From one ghost writer already thinking about his third start-up to one lone company that is creating communities for start-ups all over the world. From a coffee barista who is thinking local to local jam makers that are taking on the world. From supporting entrepreneurship online via crowd-sourcing to going straight to the source and riling up crowds of students.

It might seem odd to fill eight sessions of the biggest, free multi-media conference in Europe with guest speakers talking about starting up companies. But entrepre-

neurship is so much more than just that. It is about taking risks, following your passions, believing in your ideas and getting them to the right user group or public. Everyone can benefit from learning how to turn a great idea into something further than just a thought.

Europe needs more entrepreneurs and the Forum encourages students to turn their business ideas into businesses. When it comes to entrepreneurship, every meeting and event, let alone elevator ride, is a potential place to practice your pitch and to watch your contacts and opportunities grow. It is not only about getting people to listen to you, but also, more importantly, about listening to what others have to say and learning from their experiences. Whether you are thinking about starting a business or onto starting your third business, you will leave the Forum inspired, with more tools than you arrived with.

Case study executed by: The Studios at Howest



Testing the ZEO



Students at The Studios



The Studios



ZEO

Nowadays we are always connected, we live in a global networked world, different time zones. *The global reach of connectivity can make the most isolated outpost into a center of learning and economic activity* (Alone Together, Sherry Turkle, 2010, p152-153). Our life is spread all over the world and we are connected to people in different time zones, continents, hence always on and urge to connect might lead to different habits and more specific sleep habits.

There is always something to do on Facebook, even in the middle of the night, mails are coming in any time day and night. Media consumption is not limited to radio and tv, but device and time shifting is really happening, building our own radio

station with platforms like Spotify, downloading TV series, film and documentaries is all within a mouse click or finger swap away on tablet or other mobile device. And are sleep disruptive elements.

At Howest we started a study with ten ZEO devices. ZEO is a sleeptracking device, which reports in ZQ every morning, in addition you get a detailed analyses of your sleep patterns REM, DEEP and light sleep, wake up times, Time to Z, which results in ZQ score. ZEO is a device that makes you aware of your sleep patterns, and triggers you to change behavior for the good, optimizing your sleep to get active and dynamic days.

Case study executed by: The Studios at Howest



Norfolk County Council



The background of the page features a light blue, semi-transparent world map. Overlaid on the map are the silhouettes of four people standing in a row, facing forward. The word "NORFOLK" is printed in a large, bold, italicized, dark blue serif font across the center of the image.

NORFOLK





Audience



Virtual studio



Health Shoot Case Study

The aim of the health shoot blue screen studio work undertaken in June 2009 was to create a series of virtual environments for an immersive video installation featuring actors as ‘virtual characters’ situated in various real-life locations. The major issue which was anticipated ahead of the studio shoot, and was found to be the biggest challenge on set, was the accurate matching of perspective and lighting to produce convincing virtual environments.

Since the final video installation was to feature the participants’ own image composited in real-time into the virtual environment as part of the visual illusion, the starting point was to work out how best to design the virtual environments from this requirement and then produce them within the given time limitations. It was therefore anticipated that the process of creating realistic virtual environments with actors was going to require some significant compromises in the use of perspective and lighting,

although it was unknown at that point to what extent these aspects had to be compromised and how.

The time spent on set tackling these problems was extremely valuable since it quickly became clear that various cheats were necessary to achieve the required result and that the element of artificiality resulting from those cheats would ultimately work in the installation’s favour.

The purpose of the exercise was ultimately to expose individuals with a fear of real world situations to a typical virtual version of the same event. This would give them confidence to go on and experience a similar encounter in the real world. The tests proved very successful, with many individuals overcoming their fears of interacting with others in real world environments.

Case study executed by: Epic Studios



High Energi



Local TV Pilot



Local TV Pilot

In October 2011, EPIC partnered with local TV Production Company EYE Film and TV to pilot a new online local TV platform. The pilot would see young individuals who were either out of work, or keen to gain new work experience, selected to receive professional mentoring on production techniques for short themed videos, suitable for distribution online. A video platform was then developed using simple WordPress components.

With a structure in place to host the video, various programme concepts were brainstormed and planned before filming began across the city of Norwich. Ideas ranged from Taxi Rant, that saw local taxi drivers rant about local issues and, What Are You Wearing, which saw individuals describe their look from head to toe. During the pilot, the team also celebrated the anniversary of the passing of the late John Peel who was well known for championing new upcoming music acts on UK

national radio. This saw a live impromptu gig held on the streets of Norwich featuring local acoustic acts.

The experience aided some individuals to go on to find work off the back of the exercise, and lays the foundation for Norwich to form its own online local TV platform capable of delivering relevant programming to a local audience. The pilot proved that there is interest in local TV provision, which the UK Government is keen to support in 65 locations up and down the UK. The basic concepts for this pilot were formed earlier in the year through an exchange with our partners at Howest in Kortrijk. Students visited on an exchange to receive tuition in Final Cut Pro editing tools and subsequently went on to make short video pieces about student life in Norwich, an exercise that will be repeated in 2012.

Case study executed by: Epic Studios



University of
Stavanger

ipark
INNOVATION PARK
STAVANGER



ROGALAND TRAINING & EDUCATION CENTRE



ROGALAND



E-CLIC Mid-term Conference, Hannover 2010



E-CLIC meeting, Stavanger 2011



Digital Stills and Movie Camera

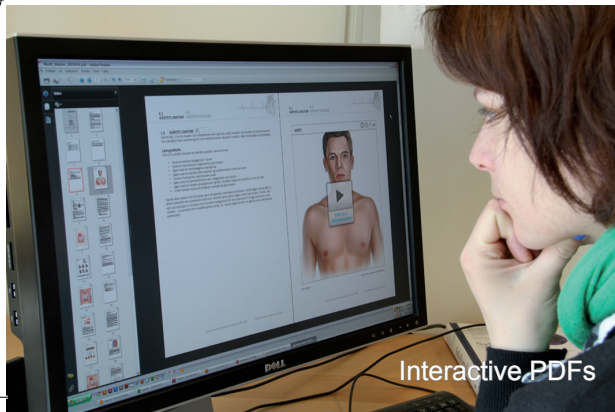
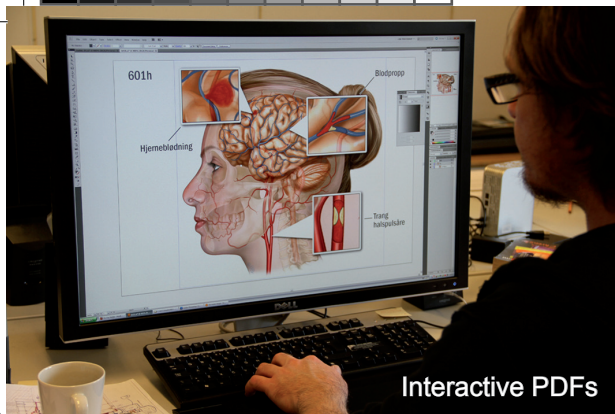
Throughout the last decade the traditional newspapers have evolved into multimedia companies presenting the news in all available mediums (TV, radio, net, mobile devices etc, etc). At the same time, the number of subscribers has declined, since people do not want to pay for news anymore. This has led to serious rationalizations in editorial offices trying to find new ways to make the journalists and photographers work more efficiently, which has led to a mash-up between duties of photographers and videographers. Having realized that, in order to serve this new set-up, technical equipment providers started developing appliances offering a mixture of various

functions.

Within the framework of the project, practical, user-driven tests of two cameras offering both digital still and movie features were carried out. Groups of students tested the cameras from various aspects (sound, compression, compatibility with editing softwares etc.).

The overall conclusion of the analysis was that DSMCs have a lot to offer as cameras, however, they have a long way to develop to be able to offer the proficiency of traditional videocameras.

Case study executed by: University of Stavanger





Interactive PDFs

Nettop, the department for e-learning at the University of Stavanger, is producing media-rich interactive PDFs as part of the University's digital learning resources catalogue.

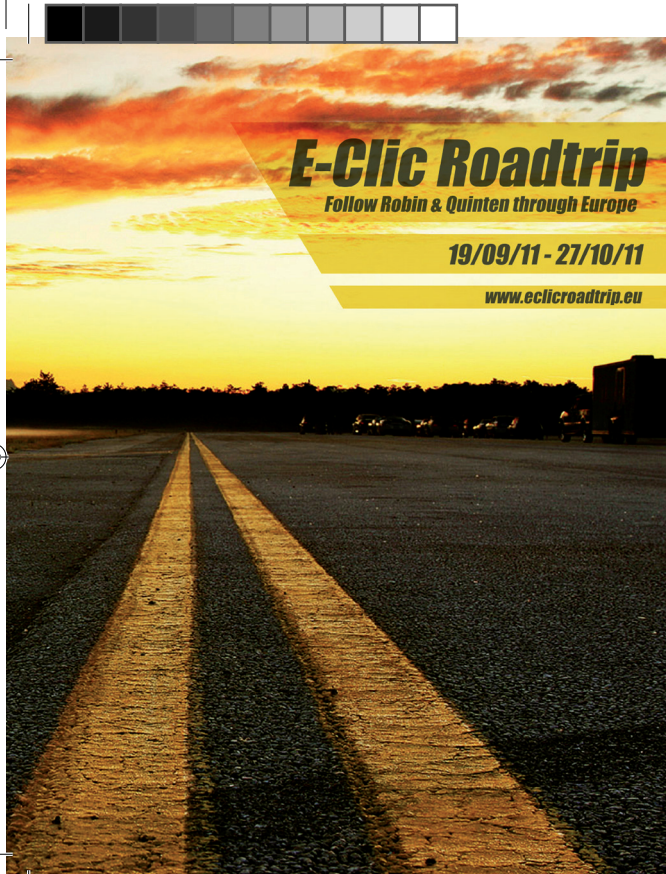
A bridge between traditional books and digital e-learning tools is provided through interactive PDFs. The Bachelor in nursing at the Institute for Health Studies is one of the first degrees currently benefiting from this initiative.

Interactive PDFs includes texts like a normal document, but contain added embedded features. The objects are easily produced in Acrobat CS5 InDesign and Flash programs, with no additional programming. Adobe Reader is utilized as browser, which in turn has many interactive features. The advantages of using an already developed reader platform are numerous; the many functions for text and document management are already there, so focus on the content of the PDFs and developing

good flash interactions were paramount. Using Adobe Reader also means that the document is print on demand - something students like to have the option to do. The PDFs can also be viewed offline, with only certain specialized features needing internet connection (it is fully possible to make completely offline interactive PDFs). The student can download the PDF file locally and work in the document, personalizing notes and highlighting areas as they wish.

Flash elements can include film, animation, mini game solutions and quizzes as well as simple interactive illustrations. Sound can be embedded as mp3 files direct into InDesign, which come with a default control bar. As a total package, this solution is one which gives the students the best of both worlds: media rich e-learning for on-screen use and a print on demand illustrated text document.

Case study executed by: University of Stavanger





E-CLIC Roadtrip

The E-CLIC roadtrip started on September 19 when the two students, Robin Cox and Quinten De Corte, started recording the video that shows the work of the eight E-CLIC centres. The first two days of filming were spent on home ground in Kortrijk. Travelling to Groningen was the officially starting shoot of the roadtrip. They stayed in Groningen three nights and then made their way towards Stavanger, with a one night stop in Aalborg, Denmark. They arrived in Stavanger on 25 September and stayed there for three nights, leaving for Karlstad on 28 September. After three nights in Karlstad the route took them to Borås via Gothenburg - arriving in Borås on 2 October staying for two nights. Their next stop was Hannover, where they arrived 5 October and stayed for three nights. Wilhelmshaven was next on the schedule; they

arrived 9 October and stayed there for three nights. After Wilhelmshaven it was back to Kortrijk and then off to Norwich for ten days of editing. Altogether the trip took them 4500 km around the North Sea Region.

Both Robin and Quinten have been involved in student exchanges through the project, which is one of the E-CLIC goals. The student exchanges have lead to further understanding of different cultures and to more impetus to visit each other's countries - virtually and in real life - for leisure or for study or employment opportunities.

The video shows, in a relaxed but still informative way, what the different centres have accomplished during the project period. It is a great film – watch it!





E-CLIC Groningen runners



E-CLIC meeting, Groningen 2011



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