



Information Society
and Media

Mobile Broadcast - just TV or new services?



The EU funded R&D perspective

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Convergence of mobile and broadcast environments
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<http://www.cordis.lu/ist/audiovisual/index.html>

The views expressed in this presentation are of the author, and do not necessarily reflect the views of the European Commission

Mobile broadcasting services not any more a dream

«Je rêvais d'une boîte magique que je pusse emporter devers moi, qui me livrât des images et des portraits que je pusse animer ou qu'animât celui qui me les envoyait»

Savinien Cyrano de Bergerac
(L'autre Monde ou États et Empires de la Lune, 1657, p.211)

- Already commercial networks operate in Korea;
- In the US a nationwide network is currently being deployed aiming at commercial operation within 2006;
- First European commercial networks are also expected to be launched within 2006;



Delivering TV services to handheld devices

the expectations

- 3G subscribers can already watch some video clips;
- Too early to say whether it will a "killer application";
- Results from surveys and pre-commercial pilots vary;
- On average, people are expected to watch 3-15 minutes of mainly news, sports and music TV mostly while commuting;
- Asian users have been quicker to embrace mobile TV but this does not indicate that the service will equally successful in Europe (e.g. iMode);
- The fact that Europeans are far larger public transport users than Americans is one reason why portable media may take off also in Europe;
- Culture variations between countries will also play a role;

Delivering TV services to handheld devices



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the surveys

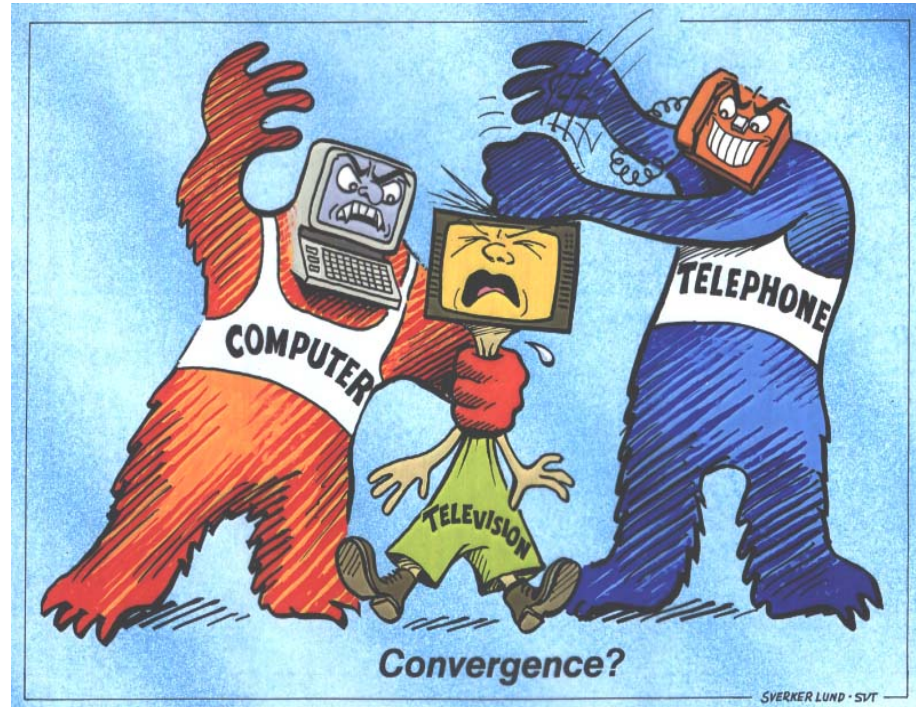
- One of the world's first commercial mobile TV pilots was conducted in Helsinki, jointly by Digita, Elisa, MTV, Channel Four Finland, Nokia, TeliaSonera Finland and YLE between March and June 2005 with 500 (**paying**) users;
- 41% of the pilot's participants would be willing to purchase mobile TV services, and consider a monthly fee of €10 as a reasonable;
- 58% believed broadcast mobile TV services would be popular;
- Mobile TV users spent ~20 min/day watching, while more active users watched between 30 to 40 minutes per session;
- Pilot members were charged €4.90/month with half of those that took part consider **up to €10/month** as reasonable;



Cellular and broadcasting networks co-existence

- Although the benefits of such a co-operation (or **co-existence**) are/were obvious (costs reduction, spectrum efficiency, QoS, improved service usability and user experience), but...
- Broadcasters tried to defend their UHF spectrum (e.g. WRC 2000 results);
- Cellular was/is perceived as a "convenient" return channel that will enable the broadcasters to enhance their service offering;
- While mobile operators mainly concentrate on UMTS;
- trying to recover the huge licensing costs of 3G;
- However, pressure on broadcasters to give up part of the UHF spectrum (in relation to the analogue switch-off) may increase;

Co-existence or convergence the view ~10 years ago



- This prophecy was not true;
- Similar "fears" exist today from different technologies (IPTV, VoIP, etc.);
- The central role in the picture could be played by fixed or wireless operators but also by broadcasters;



Challenges ahead

short to medium term

- Assumption: mobile broadcasting networks deployed in Europe will be based in more than one technology;
- This will have an impact on the availability of spectrum for mobile broadcasting;
- Spectrum availability also depends in country-specific characteristics, such as the success of DTV or other digital broadcasting technologies (e.g. DAB);
- Will mobile operators, broadcasters **and regulators** accept the joint business opportunity?
- Could harmonisation among countries and regions be realised?

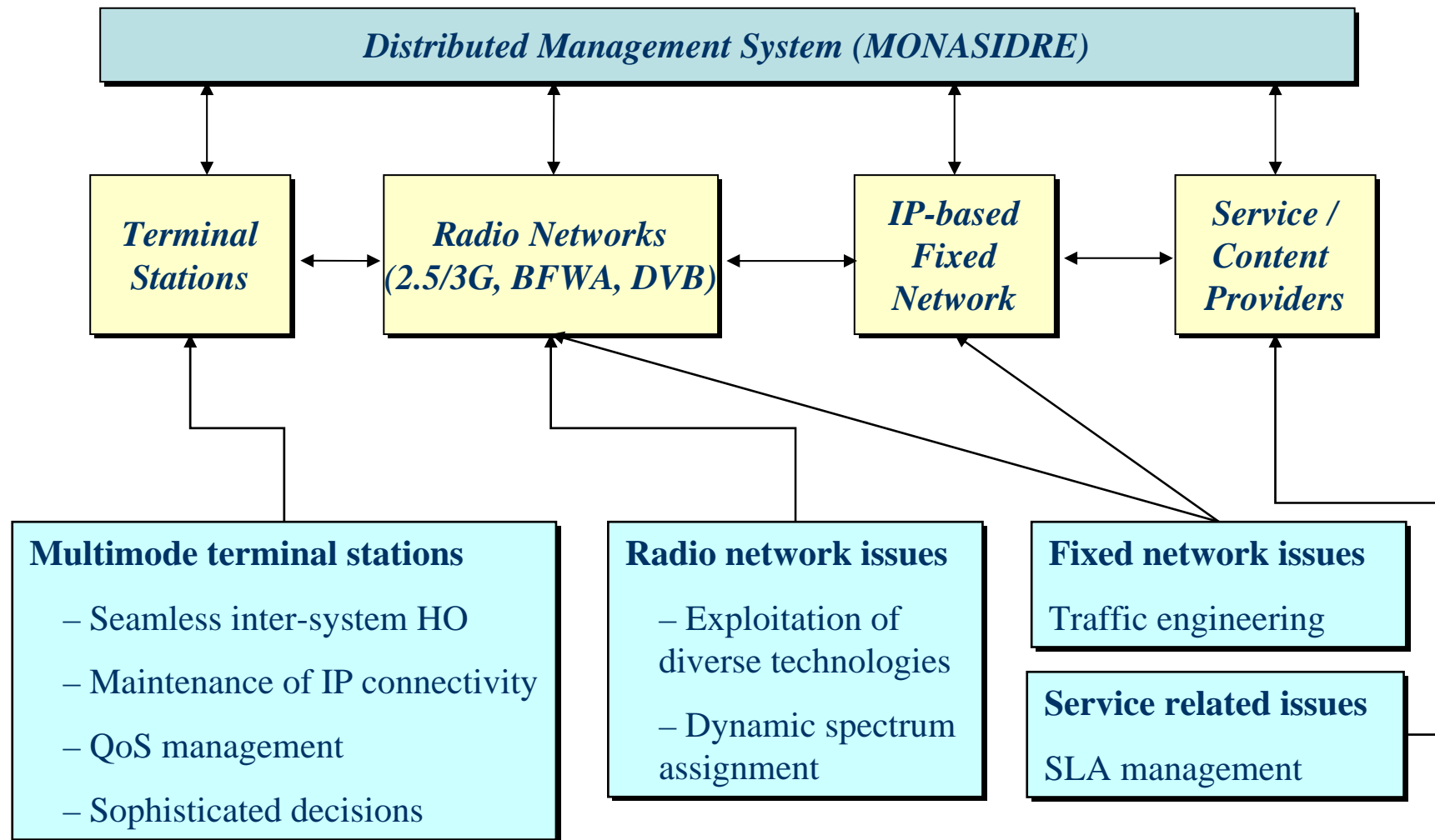
Challenges ahead

medium term

- An effective network co-operation framework is needed;
- The role of middleware is crucial in order to ensure a seamless service provision user experience;
- Need for an independent distributed management architecture;
- Need for a change of commercial practices by wireless operators and broadcasters (e.g. network traffic information);
- Regulatory framework and spectrum licensing;



An example: IST MONASIDRE (FP5)





Future research opportunities from 1G to 2G mobile broadcasting

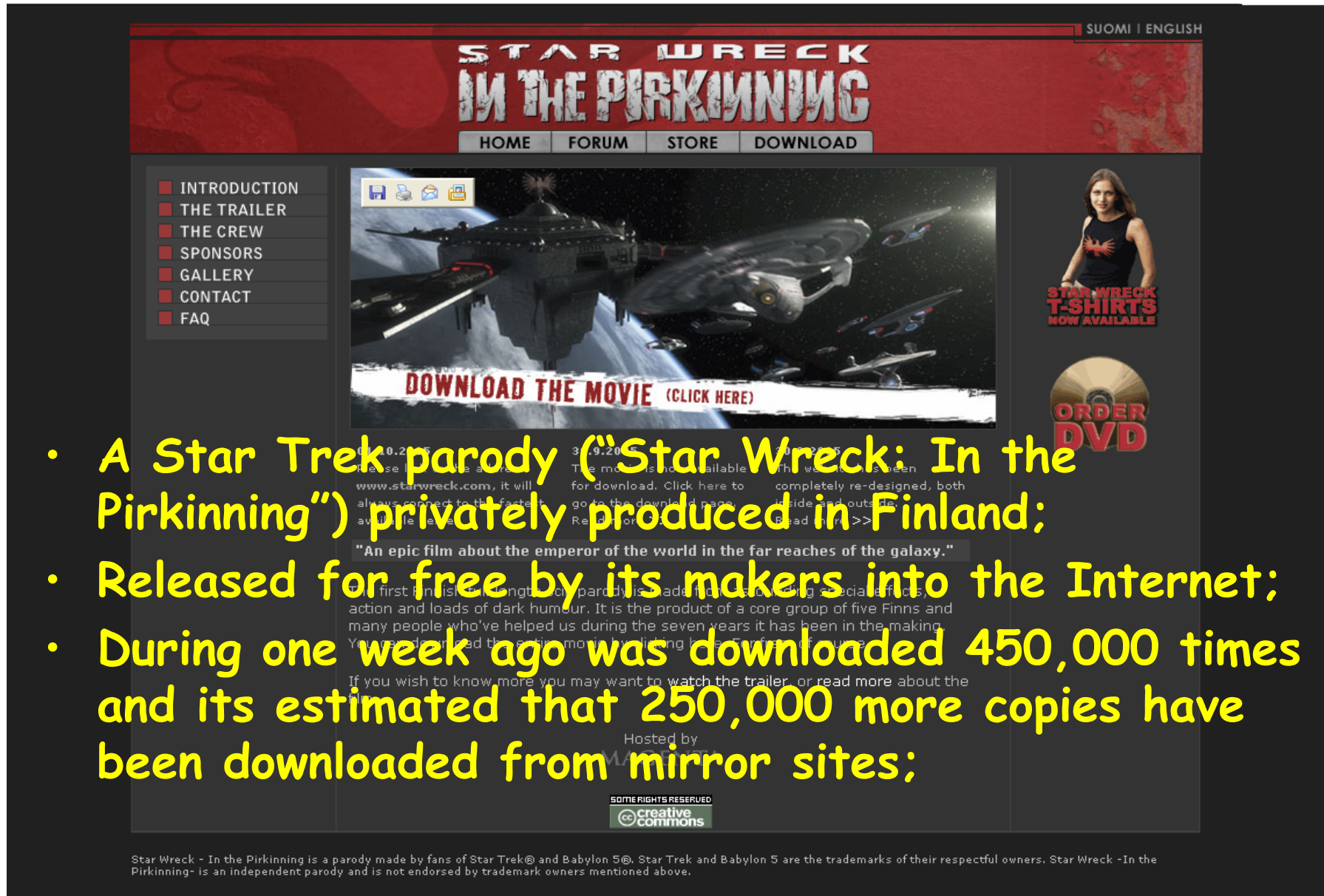
- Current (1G) mobile broadcasting systems focus on TV-centric services and "singular" technology implementation;
- What are the features of next generation?
 - Advanced compression techniques;
 - Cross media consumption;
 - Composite networks aided by advance middleware and agents and improved service discovery (=4G?);
 - Harmonised spectrum usage;
 - A new air-interface;
- Perhaps broadcasting will not be only characterised by "one-to-many";

Future research opportunities depend on the trends in media creation / consumption



- New focus is on user centric media (today's examples: podcasts, blogs);
- 'Broadcast' content into the home will not be the main home media experiences;
- From professionally produced to user created content;
- From structured to un-structured distribution of content;
- From one-to-many to one-to-some;
- The mobile terminal will assume a more active role;
- Relaxing requirements on spectrum;

Trends in media creation/consumption



The screenshot shows the website for 'Star Wreck: In the Pirkinning'. The main header features the title in a stylized font and navigation links for HOME, FORUM, STORE, and DOWNLOAD. A sidebar on the left lists menu items like INTRODUCTION, THE TRAILER, THE CREW, SPONSORS, GALLERY, CONTACT, and FAQ. The central content area displays a large image of a spaceship in space with a 'DOWNLOAD THE MOVIE (CLICK HERE)' button overlaid. To the right, there are promotional banners for 'STAR WRECK T-SHIRTS NOW AVAILABLE' and 'ORDER DVD'. Below the main image, there is a quote: "An epic film about the emperor of the world in the far reaches of the galaxy." and a paragraph of text describing the movie as a parody. At the bottom, there is a Creative Commons license notice and a disclaimer: "Star Wreck - In the Pirkinning is a parody made by fans of Star Trek® and Babylon 5®. Star Trek and Babylon 5 are the trademarks of their respectful owners. Star Wreck -In the Pirkinning- is an independent parody and is not endorsed by trademark owners mentioned above."

- A Star Trek parody ("Star Wreck: In the Pirkinning") privately produced in Finland;
- Released for free by its makers into the Internet;
- During one week ago was downloaded 450,000 times and its estimated that 250,000 more copies have been downloaded from mirror sites;



Future research opportunities preparing towards FP7

- These views were also presented in an EC organised workshop on future R&D challenges in the Networked Audio-Visual Systems took place in Brussels on 6-7/10/2005;
http://www.cordis.lu/ist/audiovisual/projects/ws/ws_fp7_b.htm
- It aimed at defining the R&D challenges and EU priorities under the ICT priority of the 7th Framework Program of EU funded R&D (2006-2013);
- Contributions received in public on-line consultation (spring 2005) from the basis of the workshop;
ftp://ftp.cordis.lu/pub/ist/docs/ka4/au_fp7_consult_publish_en.pdf

Conclusions



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- Although the co-operation of broadcasting and cellular bearers has obvious advantages its market success of mobile TV services is yet to proven;
- In the medium such network co-existence opens future opportunities for advanced and dynamic RRM and even flexible spectrum allocation;
- Traditional business approaches and regulatory regimes may pose obstacles;
- The research investment in the area by EU funded programmes is significant;
- Investing only in the creation of new generations of technology might not be answer;

Audio
Visual News



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[HTTP://WWW.CORDIS.LU/IST/AUDIOVISUAL/PUB/NEWSLETTER.NTM](http://www.cordis.lu/IST/audiovisual/pub/newsletter.htm)

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