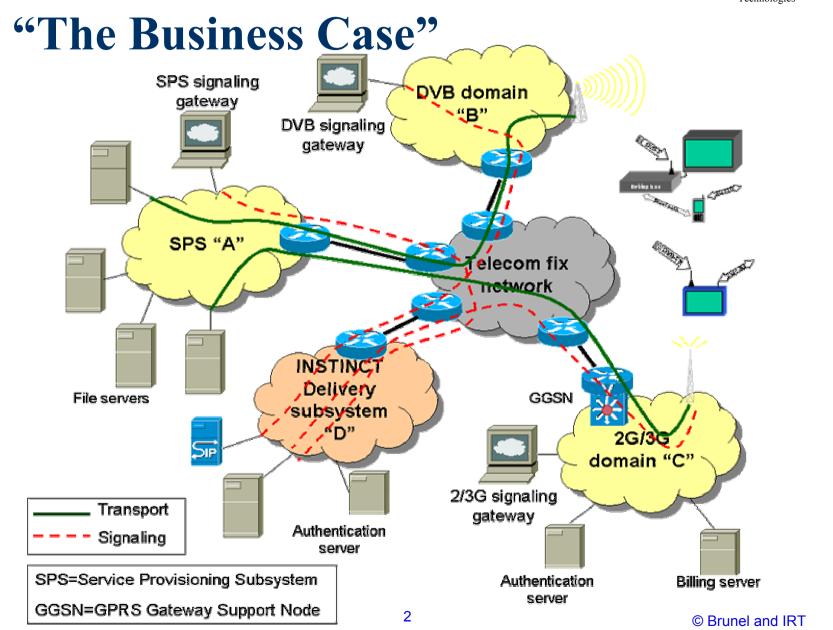


# IP-based Networks, Services and Terminals for Converging Systems (INSTINCT)

Tom Owens – Brunel University Christoph Dosch – IRT

DVB World, Dublin, 3 - 5 March 2004







#### The commitment of INSTINCT

- ✓ INSTINCT is committed to assist DVB in realising the commercial provision of convergent services in mobility.
- ✓ INSTINCT focuses on the use of the DVB-T, DVB-H and DVB-MHP standards in conjunction with wireless communications networks combined with terrestrial DVB broadcast networks.



#### The investment in INSTINCT

The first two-year phase of INSTINCT started on 1 January 2004 with **9.6 million euros** of funding by the European Commission in the Framework Programme 6.

Over the six years of the project it is anticipated that over **50,000,000 euros** will be invested in the development of the open platform and the provision of convergent services.



#### The aim of INSTINCT

A carrier-grade fully specified and open final platform for the delivery of convergent services in collaborating wireless communications and terrestrial broadcast networks.

- INSTINCT is planned in three phases over six years.
- Each project phases will last 2 years
  - Phase 1: Jan 2004 Dec 2005



#### **INSTINCT Phase 1**

# Phase 1 is the technology and development phase

- Equipment will be developed
- Service and application development tools will be provided
- The right APIs and the right content will be put in place



#### **INSTINCT Phase 2**

# Phase 2 will apply the technology developed in Phase 1

- Medium-scale field trials
- Network Engineering for coverage and inter-operability
- Targeted services and application development



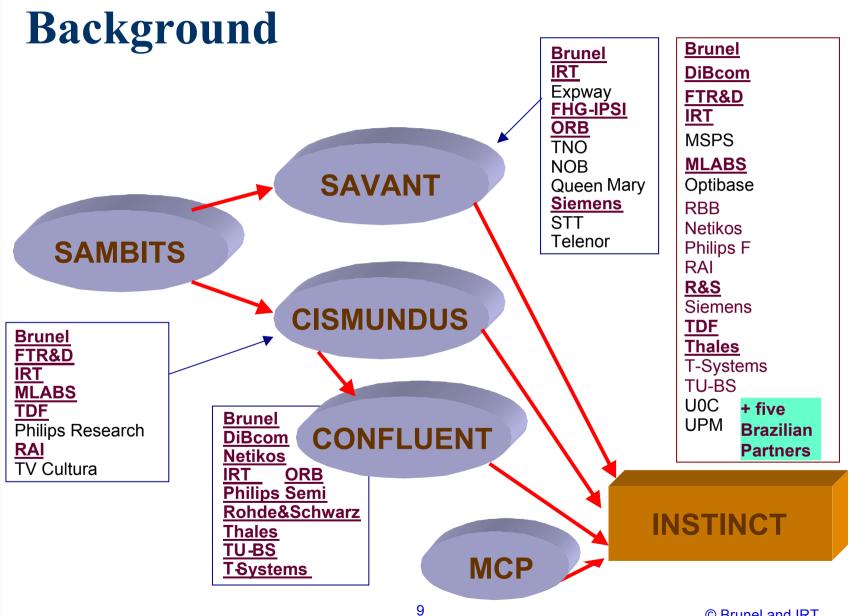
#### **INSTINCT Phase 3**

# Phase 3 will involve real large-scale field trials and involve more operators and local communities

- Promotion
- > Encouragement of investment
- > Effective dissemination and training



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### Participants in INSTINCT

- Brunel University (UK)
- DiBcom (FR)
- France Telecom R&D (FR)
- <u>IRT</u> (DE)
- Motorola SPS (FR)
- Motorola Labs (FR)
- Optibase (IL)
- RBB (DE)
- Netikos (IT)
- Philips France (FR)
- RAI (IT)
- Rohde & Schwarz (DE)

- Siemens (DE)
- <u>TDF</u> (FR)
- Thales B&M (FR)
- T-Systems (DE)
- TU Braunschweig (DE)
- Open Univ. of Catalunya (ES)
- University of Madrid (ES)
- State Univ. of Amazonas (BR)
- University of Sao Paulo (BR)
- CESAR (BR)
- Genius (BR)
- CERTI (BR)



#### **Brazilian involvement**

#### Participation in INSTINCT enables Brazil to:

- ✓ Enter a phase of active co-operation and transfer of knowledge in view of a growing awareness of DVB technologies in Brazil
- ✓ Develop general and specific partnerships for the next generation of technologies and standards



#### Potential users of INSTINCT

INSTINCT targets the following mobile users:

- Young urban customers
- Corporate users
- ■The general public on the move:
  - ➤ Walking in a mall
  - > Sitting at lunch
  - > In cars and public transport
  - > Transiting through any public areas

Note: The INSTINCT concept may allow additional log-in into public WLANs.



## **Specific objectives of PHASE 1**

- Business-aware description of targeted scenarios
- Service & Application Tool suite implementation
- API evolutions and middleware software
- Static antennas and low power Front-ends
- Very low power DVB-T transmitter
- Integrated platforms (Hardware/Software)
- Measurement equipment for DVB-H signals
- QoS management tools (probes and platform)
- Open pan-European interconnected demonstration platforms
- Field trials and customer validations
- Approval of structure for training



#### **INSTINCT WP Structure**



WP2

"Eco"System aspects

**Human factors** 

Reference scenarios

System architecture and dimensioning

**Business models** 

FTR&D

WP3

Service and application aspects

Service creation tools

**Content creation tools** 

**Service management** 

User Interface and Application tools

**Brunel** 

Terminal front-end aspects

UHF Antennas &
diversity
Low power RF front
ends and base-band
DVB-T/H+ receiver
implementation

WP4

**Dibcom** 

WP5

Terminal platform & middleware aspects

Terminal modeling and profiling

MHP over DVB-T/H and MHP in Brazil

**MIDP** aspects

Value-added hybrid network middleware

**Motorola Labs** 

Radio network aspects

Radio network
engineering
Low power low
complexity transmitters

Low power transmitters

DVB-T+/H and Cellular co-sitting

**Thales** 

WP7

WP6

**Backbone aspects** 

Fix network architecture

Protocol engineering & network management

QoS Management toolbox

DVB/IP head-end for mobile

Rohde&Schwarz

WP8

Integration, demonstrations and field trials

Scenario implementation

Integration

Field trials

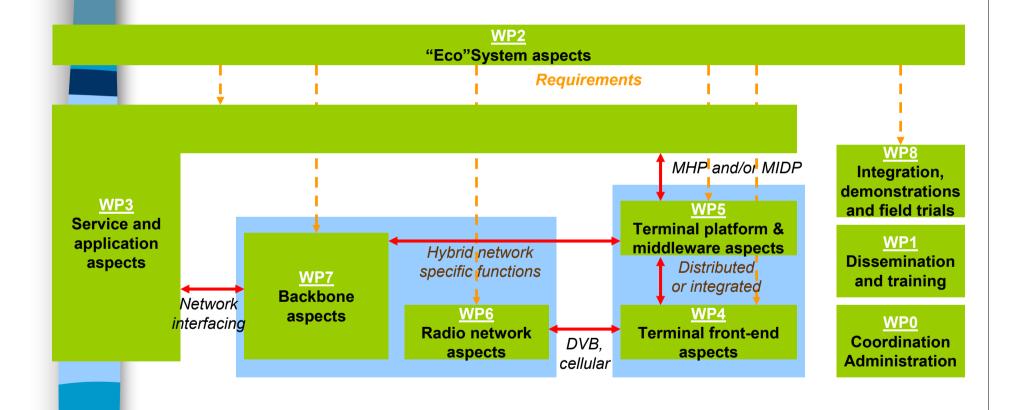
**Consumer validation** 

**Demonstrations** 

**TDF** 

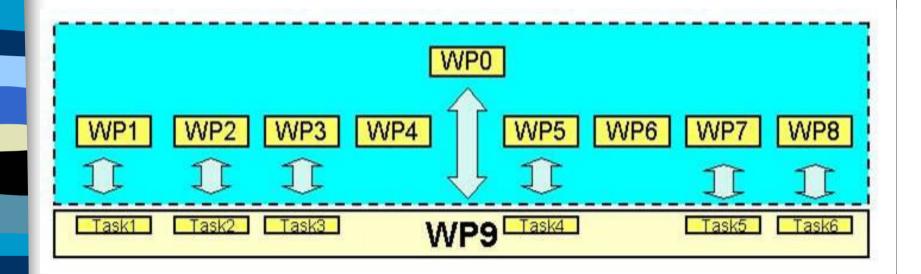


## INSTINCT Work-package Interdependence





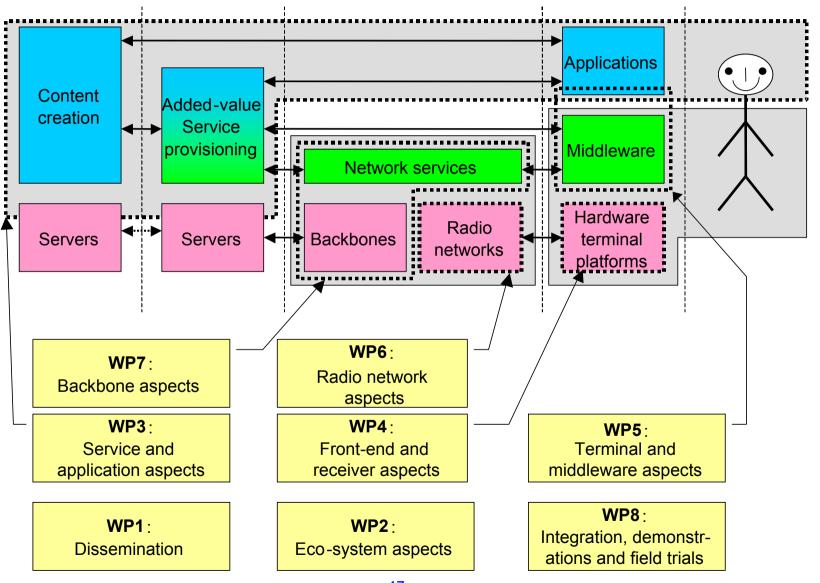
# Relationship between the Brazilian Tasks and the other Work-packages



WP9: Implementing the INSTINCT concept in Brazil

#### **Reference Model**







## **Concluding remarks**

For the end user, the INSTINCT concept will provide cheap and easy-to-use DVB services on a handheld terminal.

- ➤ It will be investigated how the MIDP Java API can be used and can interact with MHP to develop application software.
- ➤ It will be identified and specified how thin client devices such as smart phones can use MIDP to receive a subset of a full set of a DVB service.







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