UNIACCESS
Design of Universal Accessibility Systems for Public Transport

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What is UNIACCESS?

- **2-year Coordinated Action** to define concepts for universal accessibility in public transport, 6FP
- **Goal**: promote and support the networking coordination of research and innovation activities in the field of universal design of accessibility systems for public transport.
- **Partners**: multi-sectoral (GIAT, ENIL, AGE, SINTEF, CRF, COCEMFE, STS, POLIS, RATP)
- **Group of experts** (professionals & academics)
Why Uniaccess?

Society’s commitment to equality of opportunity

Yet, Public transport far from being accessible due to:

- No accessibility provisions
- Discontinuity in accessibility provisions
- Accessible devices out of order
- Public and staff attitudes
- Lack of universal design principles adopted in transport sector in contrast to building sector
However

- All passengers benefit

- Commercial issue: hidden group of potential public transport users

- Financial issue: reduced need for specialised transport

Accessible bus, Norway

Accessible metro, Copenhagen
Main activities of Uniaccess

- To gather **state-of-the-art knowledge** on accessible systems for public transport.

- To produce a **roadmap of future R&D**

- To come up with **new R&D project proposals** → allows us to bridge the technology gaps.

- To define an improved **collaborative innovation process**

- To **raise awareness** of universal design
State of the art – Infrastructure

- High cost of retrofitting older stops/stations
- Furniture installed by service providers is a major obstacle
- Verbal announcements are difficult to deliver
- Wide control gates encourage fraud.
- Illegal parking at bus stops

Adjusting old building, Zagreb

Bus stop in Malmø
State of the art – vehicles

- Costly retrofitting of vehicles
- Life of certain vehicles very long
- Boarding/alighting is still a challenge
- Time lost due to opening/closing ramps
- ‘Irresponsible’ driving
- Wheelchair users take more place in vehicles than other users and their evacuation can take longer.
State of the art – legislation & standards

- Legislation on public transport accessibility in Europe varies widely in scope and structure.

- Where legislation exists, it is not always adequately implemented due to lack of guidance, funding and enforcement.

- Absence of public transport accessibility standards – industry is asking for standards.

- Legislation & standards alone will not deliver full accessibility. Policy and societal actions have a role to play.
State of the art – society

- Lack of societal awareness about human diversity.

- Staff attitudes towards people with reduced mobility

- Private cars and specialised transport (taxis, community buses, etc) constitute a significant cost (environmental & financial) for society
Methodology for preparing the roadmap for future R&D

State of the art
Requirements
Emerging concepts
Vision of the future
ROADMAP
Preparing the roadmap for future R&D

Step 1. State of the art
- An overview of the current public transport system, from the point of view of different stakeholders

Step 2. Vision of the future
- Set of scenarios involving travelers with different needs undertaking an intermodal journey from door to door (full journey chain)
Preparing the roadmap for future R&D

Step 3. Requirements

- Analysis of scenarios to identify requirements (technological, political, societal, etc) needed to make scenarios a reality.

- 59 requirements were identified for all steps of the journey:
  - To the terminal/bus stop: 9 requirements
  - At the terminal/platform/bus stop: 15 requirements
  - Boarding & alighting: 3 requirements
  - During the journey: 15 requirements
  - Information (horizontal): 15 requirements
  - Booking & paying at home: 2 requirements

- Simple, straightforward requirements, eg
  1. Ticket machine area should be accessible to all
  2. Autonomous trip planning
Preparation the roadmap for future R&D

Step 4. Emerging concepts

- Analysis of requirements led to definition of specific solutions (emerging concepts) needed to fulfill requirement.
- Solution assessed as to whether it is ‘universal’, ie, meets needs of all passengers – 9 categories identified covering physical, sensorial & cognitive impairments.
- **Example 1: ticket machine area should be accessible to all – 3 solutions**
  - No steps around ticket area
  - Ticket area is obstacle free
  - Height of device should be adjustable
Preparing the roadmap for future R&D

Step 4. Emerging concepts

- Example 2: Autonomous trip planning – 6 solutions
  - EU standards on design of public transport information services
  - Fully integrated, real-time, multi-modal information systems
  - Textual & spoken information available on different media (website, PDA, mobile)
  - Speech recognition devices
  - Option of phone or web-cam communication with call-centre operator
  - Choice of font characteristics of travel information
Roadmap for future R&D - Mapping the challenges

Step 5: Roadmap

- Takes forward those solutions deemed to have universal or broad application
- R&D challenges required to achieve a solution were identified – essentially output specifications
- Defines level of priority (Very important, important, less important, undefined)
- Planning horizon (short term 0-5 years, medium term 5-10 years, long term 10< years)
- Broken down by journey step: Before the journey, to the terminal, at the terminal/platform/stop, ticketing, boarding/alighting, during the journey, information
Collaborative processes

**Goal:**
To establish a closer link between stakeholders and define a new improved collaborative innovation process.

**How?**
- Examine current practice (how do designers, manufacturers, operators, authorities and end users currently interact).
- Identify good practice
- Prepare guidance for an enhanced ‘collaboration’
R&D project proposals

Goal:
To define new project proposals based on the R&D challenges identified in the roadmap
Dissemination

- Uniaccess Multistakeholder workshop ‘from accessibility to universal design’, 8 November 2006, Brussels


- Reference manual ‘Universal design in public transport’
For more information

- Visit our Website
  
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