Developing an ITS System Architecture for France

The ACTIF project

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Developing an ITS System Architecture for France

- Scope
- Project organisation
- Methodology for FA elaboration
- First results
- Next steps and conclusions
Scope: ITS as a whole are taken into account:

- The perimeter does *not* encompass *juxtaposed modes of transport* …

- … The aim is to have an *inter-modal* approach …
… which takes into account financial and time constraints:

The inter-modal approach (2/2)

The scope retained

The final scope (ACTIF 2)
The organisation

Strategic level

- Steering committee
- High Level Group

Project management

- Technical committee & operations mgt
- Pool of experts

Operational level

- Technical work package contractors
  - Web site, architect, case studies...
The process in summary:

- Porting of KAREN onto a design & navigation tool (MEGA)
- Architectural translation of user needs
- Integration of results from priority domain studies
- French user needs, multimodality
- Priority domain studies
- Integration of results from real case studies
- Real case studies

Methodology (1/4)
The initial step: porting of KAREN

- Porting of KAREN logical architecture onto a modelling tool: has confirmed fundamental choices made for the FA:

- To be workable and easily improved, an ITS architecture has to rely on a **design tool**:
  - Based on a methodological approach
  - That ensures consistency between all the objects

- To be useful and open, an ITS architecture description must be easily consulted through a **navigation tool** that:
  - is free and internet-based
  - is user-friendly
  - contains fully explicative diagrams
  - is easily maintainable
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Methodology (3/4)

Transport Systems and New Technologies

- Regulation enforcement
- Traffic management
- Travel information
- Emergency management
- Driver assistance
- Electronic payment
- Public transport
- Freight and fleet management
Real case studies:

- Will test the ACTIF architecture developed from priority domains
- Down to the *technical* architecture level
- Studies carried out *internally* + *externally* to the architect team
- The envisaged studies = *real* cases illustrating:
  - Travel management in urban areas
  - Real time road traffic and travel information
  - Ticketing (SITP Transmodel)
  - Fret and Fleet management (Silevic)
  - Traffic flows determination via mobile phones (Strip)
First results

- Logical Architecture
- Physical Architecture (mainly developed from priority domains)
- Web site: www.its-actif.org
- Standardisation needs identification
- Methodological guide
- A set of recommendations
What’s next?

**Next steps (underway)**

- **Course programme** based on a deployment tool for local/regional initiatives (Oscar)
  - *Training sessions*
  - *Wide dissemination* of results and continued *involvement* by stakeholders
  - *Priority applications* on road traffic information and automatic enforcement

- **Architecture maintenance**:
  - *Updating, improving and enlarging* of the architecture

- **Bilateral co-operation** with other countries expected and needed
Conclusions

- A two-way exchange with ACTIF at an European level:
  - Close collaboration with the KAREN team during the porting of KAREN
  - Traceability of the user needs and the ported architecture between ACTIF and KAREN

- ACTIF has set the challenge of getting: consistent + accessible + user-friendly tools and documentation, within 2 years,

- in order to achieve these aims, ACTIF has:
  - limited the first architecture development to priority domains
  - selected a tool that ensures the architecture basis consistency
  - selected varied experts from the ITS and the architecture worlds to carry out a quality control process + dedicated a budget to this external control (10 – 20 % of total budget)
  - involved stakeholders since the beginning of the project