

R&D Objectives: Targeting Complexity³

Diversity of user lifestyle events, situations, constraints and opportunities.

COMPLEXITY
GAP #2

Diversity of value added services and service providers

COMPLEXITY
GAP #4

Diversity of digital media channels, network capabilities and devices.

- To create tools and methods and protocols supporting development and delivery of „next generation” e-services
 - **Adaptive:** optimizing value for the consumer by adopting to the behavioral and situational characteristic.
 - **Pervasive:** delivered anytime, anyplace, over broad spectrum of channels and touchpoints.
 - **Interoperable:** aggregation of customer value by real-time service composition.
 - **Smart:** using automation, insight based on „digital trace” and integration services to eliminate non-value-added interactions.
- Design focus: customer experience & architecture
 - Metaphors enabling usability of complex services in complex environment
 - Non-emergency (mostly)
- Use Case Scenarios – Mobility & Content
 - Travel Assistant, Financial Steward

Functionalities delivered by the FI Core

- Context Awareness:
 - Open context broker architecture, with generic support for presence awareness, localisation (absolute, relative), complex event processing.
 - Event System capable of mapping events provided by various sources in the network to various domain oriented ontologies.
 - Safe, universal E-Identity standards encompassing personal “digital trace” enabling broad range of privacy policy management.
- Intelligent, interoperable, autonomous agents:
 - Reference architecture allowing for the separation of behaviour layers, such as communication, mission execution, mission management, and knowledge management.
 - A2A communication protocols based on context information and shared ontology.
 - Intelligent agent deployment environment supporting scalability and virtualization.
- Ad hoc service composition and mash-up:
 - Ontology based service discovery and invocation.
- Experimentation environment:
 - Core components of FI infrastructure, such as sensor and related communication protocols, Context Brokers, ontology based Event Management system, ontology based service discovery and invocation protocols.
- Deployment environment for the FI service components being tested.

Potential role of Infovide-Matrix in the FI-PPP

- Application Architect:
 - Designing the user experience which should be delivered to the Consumers of services in given Usage Area, as well as the technical component architecture required to deliver such experience, based on an available FI Core Platform.
 - Partner networks (including application competencies) related to the Use Cases.
- Developer/Integrator:
 - Developing applications or selected components for particular usage area,
- Validator:
 - Designing and implementing (in collaboration with the providers of FI infrastructure testbed) a sandbox environment for friendly user testing, and gathering the metrics providing quality feedback of the FI Services.
- Core Platform Contributor:
 - Context Awareness: Open context broker architecture, Complex Event Processing Platform.
 - Intelligent, interoperable, autonomous agents: Reference architecture, A2A communication protocols based on context information and shared ontology.
 - Ad hoc service composition and mash-up: Service Engineering Methods & Tools