

UWA



Ubiquitous Web-Applications



Development of Methods,
Notations and Tools for
Design and Prototyping of
complex ubiquitous
Web-Applications

www.uwaproject.org

What is a Web application?

- An application designed from the start to run in a web-based environment
 - ➔ **Hypermedia aspects** must be taken into account throughout the application lifecycle
- A web application is an application, not just a set of web pages
 - ➔ Implies the notion of a **session**

What is an **ubiquitous** Web application?

- Anytime / anywhere / anymedia syndrome
- Takes into account different capabilities of devices (display size, method of input, ...)
- Must be **context-aware**
- Must support **personalisation**

Customisation -- the key to UWAs

- Customisation as the uniform mechanism to provide adaptability
- Customisation framework based on a reflective architecture

- Holistic view on the development process of a UWA

Customisation Rules

- Translate requirements into the variable part of the ubiquitous Web-Application
- Use the event/condition/action mechanism

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+CustomisationRule
R: ShowSightDescriptions, MakeInfoAvailableOnGSM
E: changeOfDevice
C: Profile, UserAgent->graphicCreated(CONTEXT[current] UserAgent) == 'FALSE'
A: textMode ( TouristicSight->switchToText )

+CustomisationRule
R: ShowRoutes, ProvideContextSensitiveInfo
E: changeOfLocation
C: Profile, Location->distance(CONTEXT[current] Location, CONTEXT[StartTime], Location) >= 5 km
A: recomputeRoute (
  street = Profile, Location->getStreet(CONTEXT[current] Location);
  RouteDescription->findRoute(street) )

+CustomisationRule
R: ShowMaps, MakeInfoAvailableOnLowBandwidth
E: changeOfBandwidth
C: Profile, Network->getBandwidth(CONTEXT[current] Network) <= 10 KB
A: resizeGraphics (
  bandwidth = Profile, Network->getBandwidth(CONTEXT[current] Network);
  SightMap->resize(bandwidth);
  RouteMap->resize(bandwidth) )
    
```