Background

- Web Map
  - Open and distributed platform design for Web Map
- SVG
  - Conforming and standardizing web map to popular vocabulary = SVG Map consortium http://blog.svg-map.com
- Cell Phone
  - Implementation of SVG Map to tiny computer
  - Making to business = EZ guide map platform

Rise of mobile computer

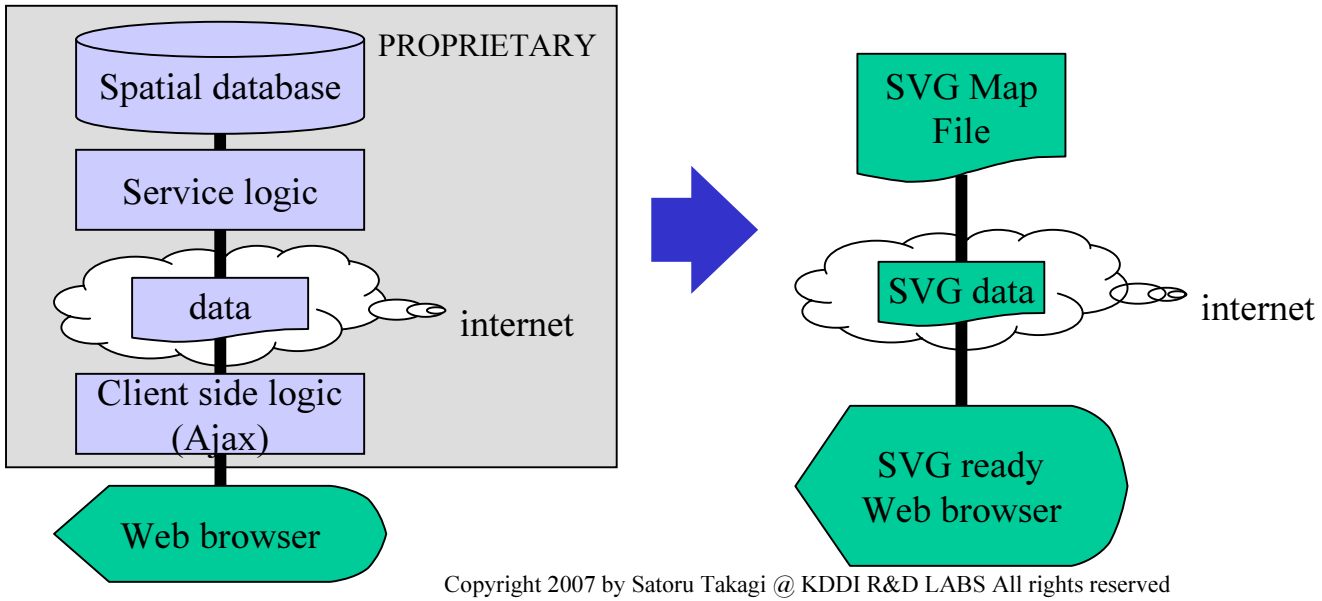
- Desktop and mobile exists as “mode” of the use environment.
- At first, only the mobile phone had succeeded.
- The new kinds of mobile computers had risen.
  - Mobile Audio/Video Player
  - Personal Navigation Device
    Note: The primary presentation media for PND are maps.

  ＝ Diversification of “mobile mode”

One Web! ＝ Mobilization of web technology

Our Activity

- We believe that Web Map become the basic function of WWW.
- However, existing functionality of Web Map Services strongly depends on each proprietary services. (google Maps, Yahoo Maps etc.)
- We located SVG Tiny as a platform for the Web map service.
- And, we gave SVG the well considered minimum enhancing.
- As a result, equal functionalities for existing map services was acquired only by a static server and a rich but light SVG viewer.

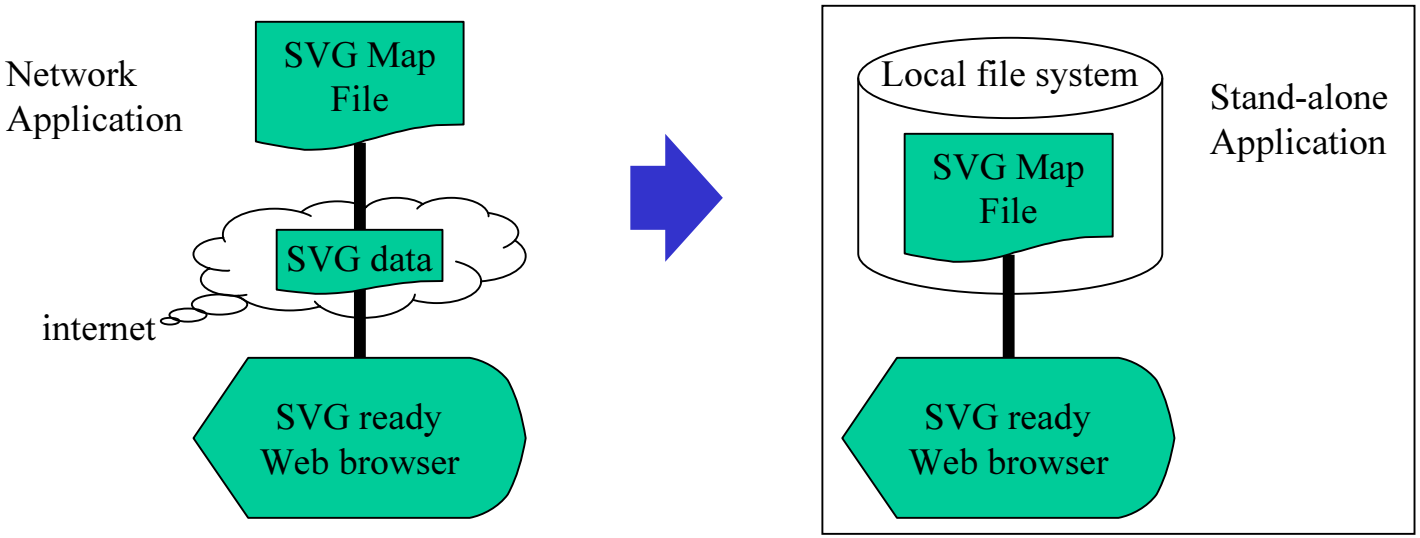


Our Experiences

- Static data and a rich but light user agent brings an important advantage in mobile applications.
  - WEB base application operates at the instable or no HTTP connection environment.

= Extension of scalability of WEB to stand alone application

KDDI started the map platform business for cell phone that was able to be operated even at the disaster because of this characteristic. (EZ guide map)



Our Findings

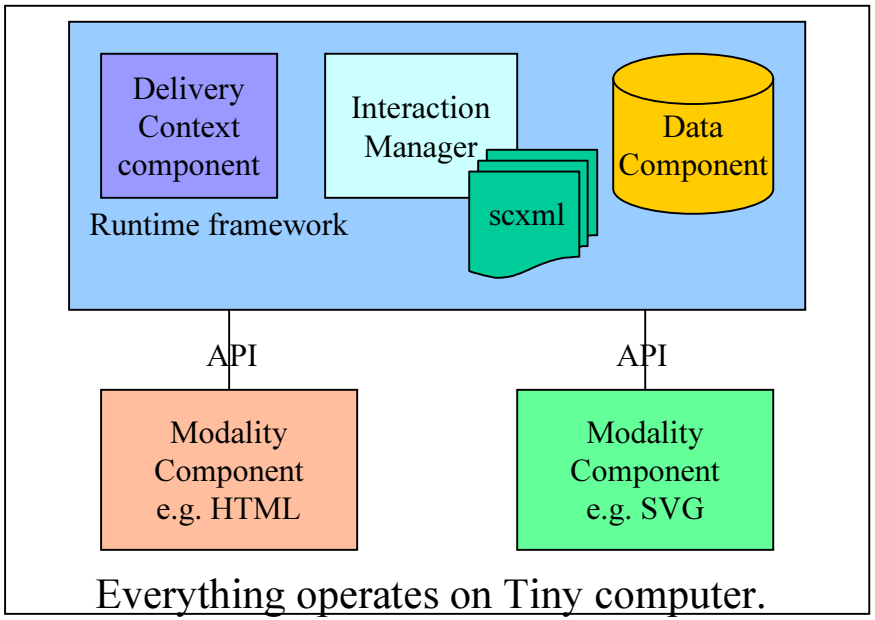
- Requirements to succeed for WWW
  - Light weight user agent but rich functionality
    (Support of hyper-text, styled-text, bit-image)
  - Very simple and static server
    that can be substituted even by mere file system
    (HTTP GET(no query part) ≒ File open)
- Besides
  - General purpose
  - Extensible to high level services
  - Distributive by loose coupling
- Heavy implementation decreases charm of WWW.
  - ~~Server centric architecture (WS*, SOA, …..)~~
  - ~~Heavy client~~

⇒ The basic requirements for architectures of WWW.

And MMI

- If MMI is the basic part of WWW, it should also satisfy these requirements.
- It is necessary to clarify that the minimum set of Runtime Framework and its API can be implemented on the following conditions.
  - CPU < 10MIPS
  - Application memory < 1MB (including XML libraries)

Note: The reason why we selected SVGT for SVG Map is that full XMLDOM support is not necessary for it.



Introduction of RDF into MMI

RDF implementation on tiny computer — Load module size

- XML (SAX2.0) Parser — 30KBytes
- RDF/XML Parser, Serializer and RDF Object Manager with Basic Query Interface — 28KBytes

Note: SVG1.2 Tiny viewer with extension for Web Map platform — 400KBytes

⇒ RDF can be operated on tiny computer if implemented skillfully.

MMI with mesh (web) structure