### The challenge of understanding devices



### A tiny selection of device dimensions:

- Hardware characteristics
  - Screen size, network, keyboard
- Standards supported
  - GIF, JPEG, PNG, WBMP, AMR, RTTTL, MIDI, MPEG3, MPEG4, 3GPP...
- Browser behaviour
  - Formatting, speed, image layout
- MMS formatting
  - Sender, receiver clients
- Regional character set support
  - Chinese device revisions, European exports
- Ease-of-usage
  - "Clicks-to-MMS", QWERTY, internet-button, dual-screen



### What is needed?



# Flexible framework to store & track device information

Hardware characteristics & network compatibility

Firmware and client software features

Usability and performance

### **Empirical profiling & test system**

Ranges of reference content & services

An efficient workflow for profiling

Ability to customise the attributes and regressing test devices

### Device analysis & report platform

Compare sub-revisions of devices

Track issues and bugs in platforms

Benchmark device performance

Version control of profiles

### **Profile delivery platform**

Publish profiles to content providers

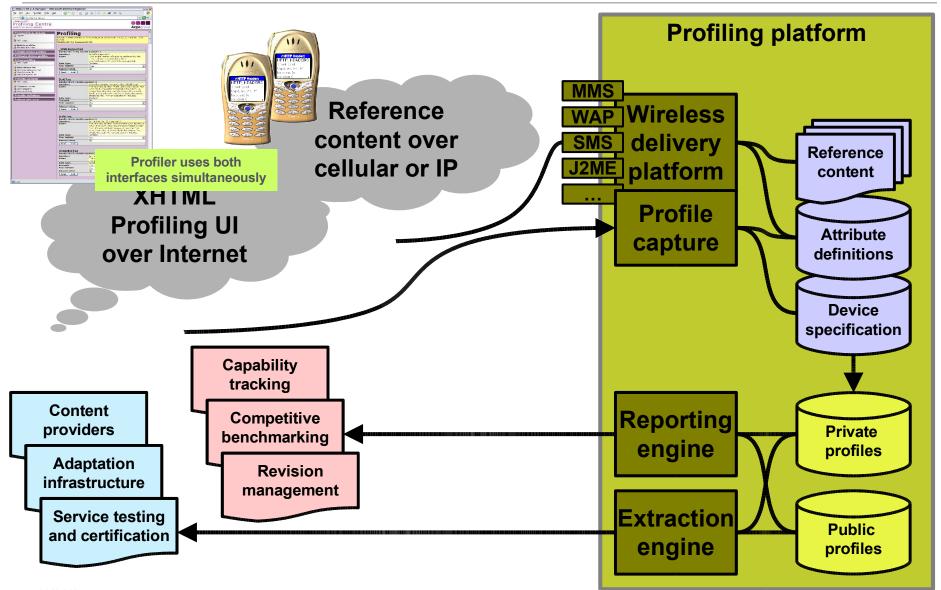
Export profiles to device infrastructure

A marketplace for sharing profiles

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# A profiling architecture





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## 3 big challenges



### 1. Understand profiling constituencies

#### Manufacturers

- UAProf... is it working?
- Do they always know their own devices?
- Do other parties trust the data?

#### Content providers

- The right part of the value chain
- Fragmented stakeholders
- Less visibility of future releases and trends

### Network operators

- Already aggressively defining devices
- Have "brand incentive" for service quality
- Need profiles for infrastructure

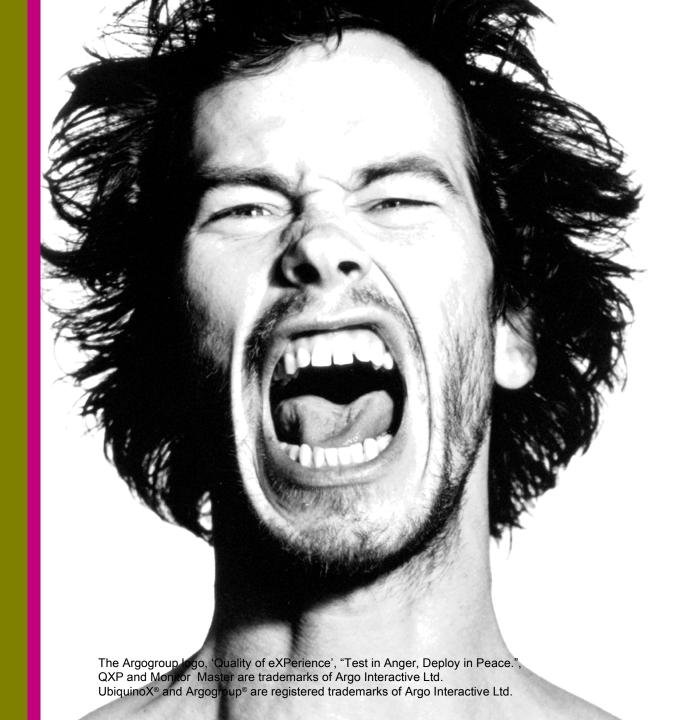
#### 2. Scale the data structure

- Too many devices in the world
  - User customisation
  - Localisation
  - Network operator customisation & skinning
- Confidence-based profiles
  - Statistical assertions based on device components, region, network used
  - Develop device and profile taxonomies

### 3. Recognise devices

- Multi-useragent mangling
  - "Everyone is trying to add value"
- Push-based services
  - SMS, MMS, WAP-push, feeds, video-calling

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