# Mobiles for Data Entry

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- 300m mobiles in India by 2008, Im per month

- 70-80% population covered by GSM/CDMA

- Much lower PC/Internet Penetration

  $\Rightarrow$ Mobile as a ubiquitous portable data entry device even when coverage not there

- **"Can Biosurveillance Algorithms coupled with Pervasive Mobile Applications potentially be effective in the early detection of disease outbreaks?"**
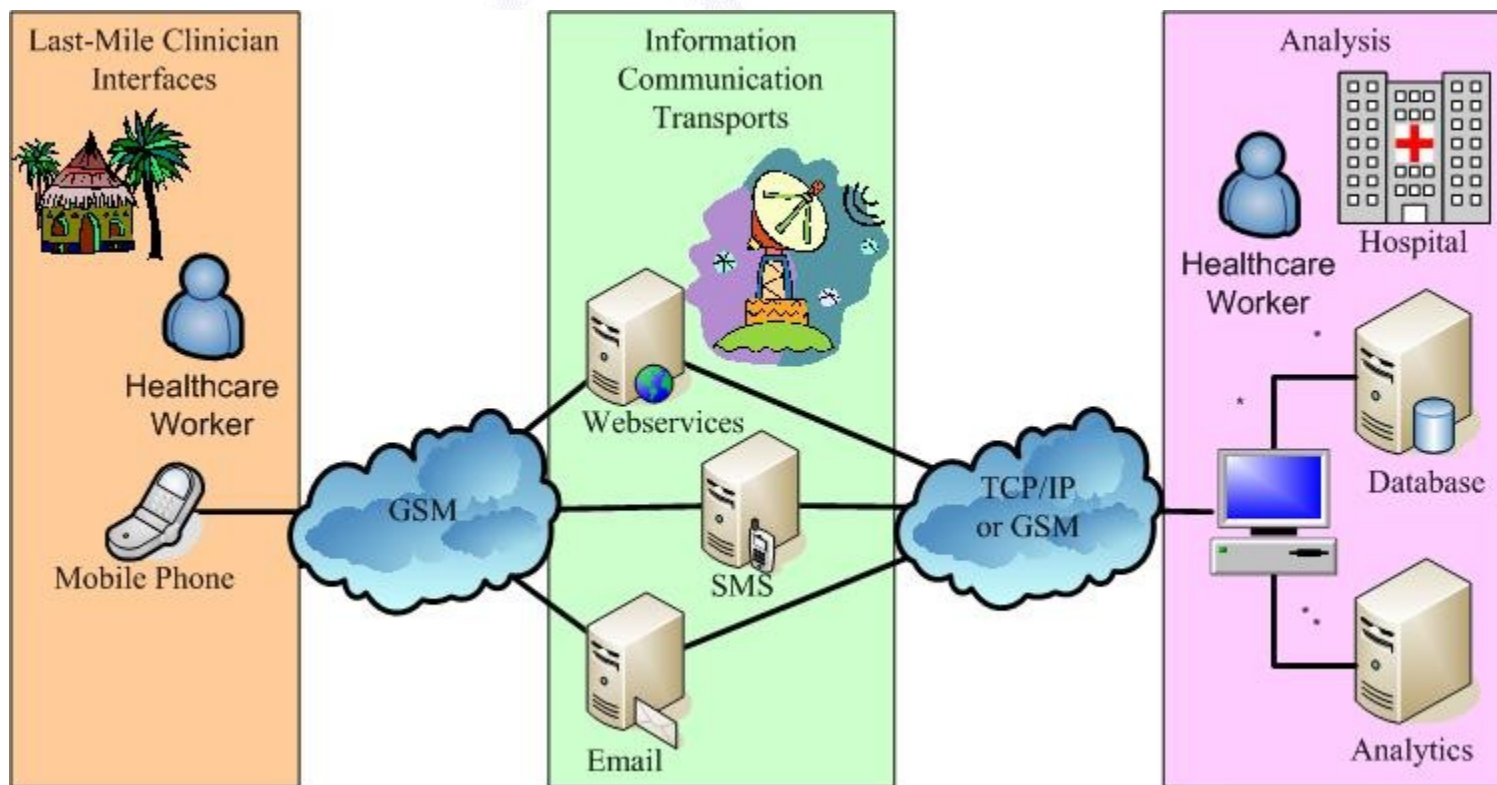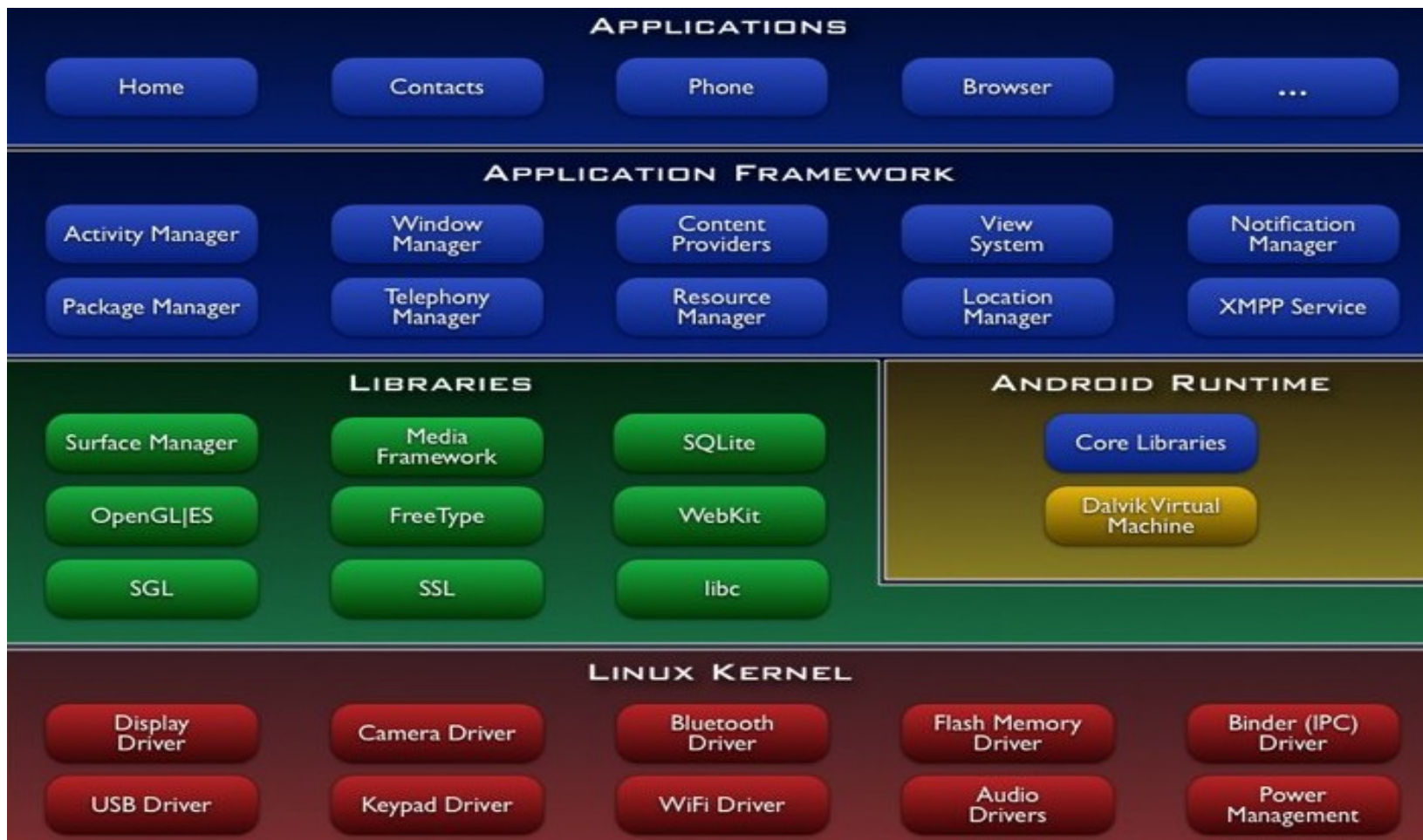
Mobile OS Market Share

- Symbian   -   72%
- Linux   -   13%
- Windows CE   -   6%
- Blackberry OS   -   5%
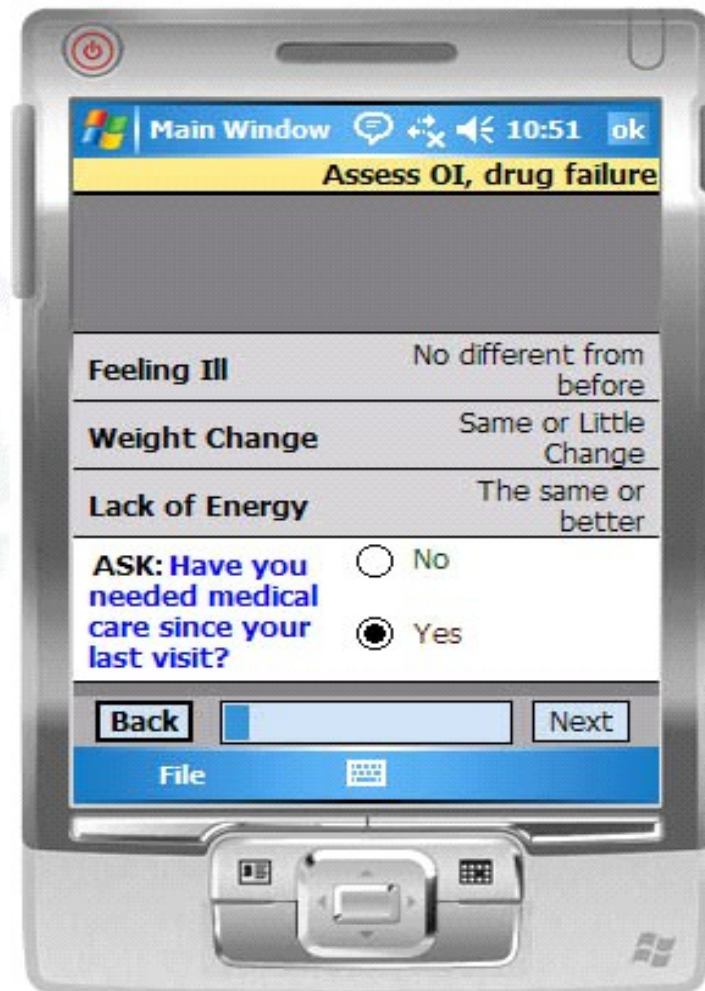- Palm OS   -   1.6%
- Apple OS   -   1.3%

Typical Mobile Software Stack

Applications 	**Applications**
	Java
Application Frameworks	
Multimedia	**Communications**
Core OS Services	

Android Software Stack

D-Tree Solutions

- iPDA like solution to be made available mobile phones with touch screen

- http://www.d-tree.org/

Application Development

1. Write in C/C++ for specific OS
2. Write in Java, runs on most phones
3. Use a toolkit:
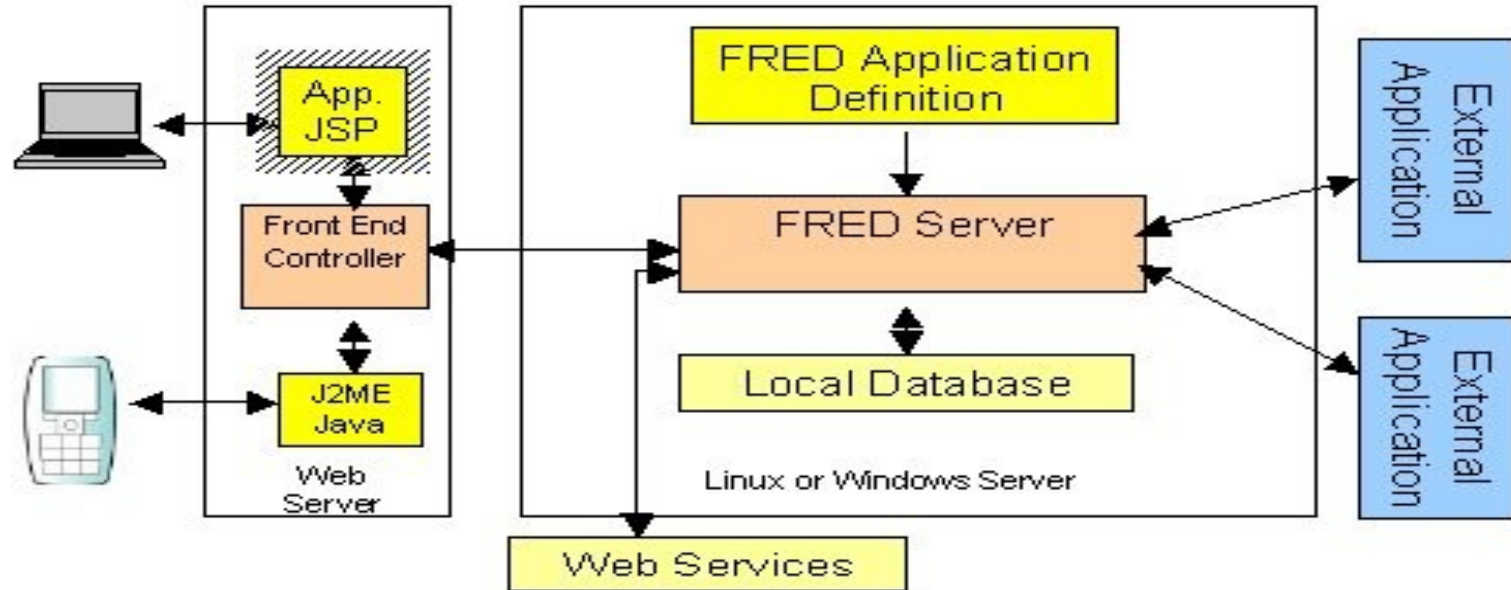
   FRED (Acceltree, Pune, India)
   – Ported to most phones

   Android (Google)
   – Linux phones

   OpenRosa (Open source)
   – a proposed standard

- Forms-based data entry from browsers and mobiles

- Server-side interface to popular DBMS

- Several clients including micro-finance