

Mobile Computing

Lecture 28

Symbian OS 2



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- SYMBIAN ARCHITECTURE
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FEATURES



- CLIENT SERVER ARCHITECTURE
- EVENT MANAGEMENT
- OBJECT ORIENTED DESIGN
- POWER MANAGEMENT
- ROBUST AND DEPENDABLE
- FULL AMULTI TASKING
- AN OPEN OPERATING SYSTEM
- MEMORY MANAGEMENT

STRENGTHS AND WEAKNESS



STRENGTH

- MEMORY MANAGEMENT
- EXECUTION IN ONE PLACE

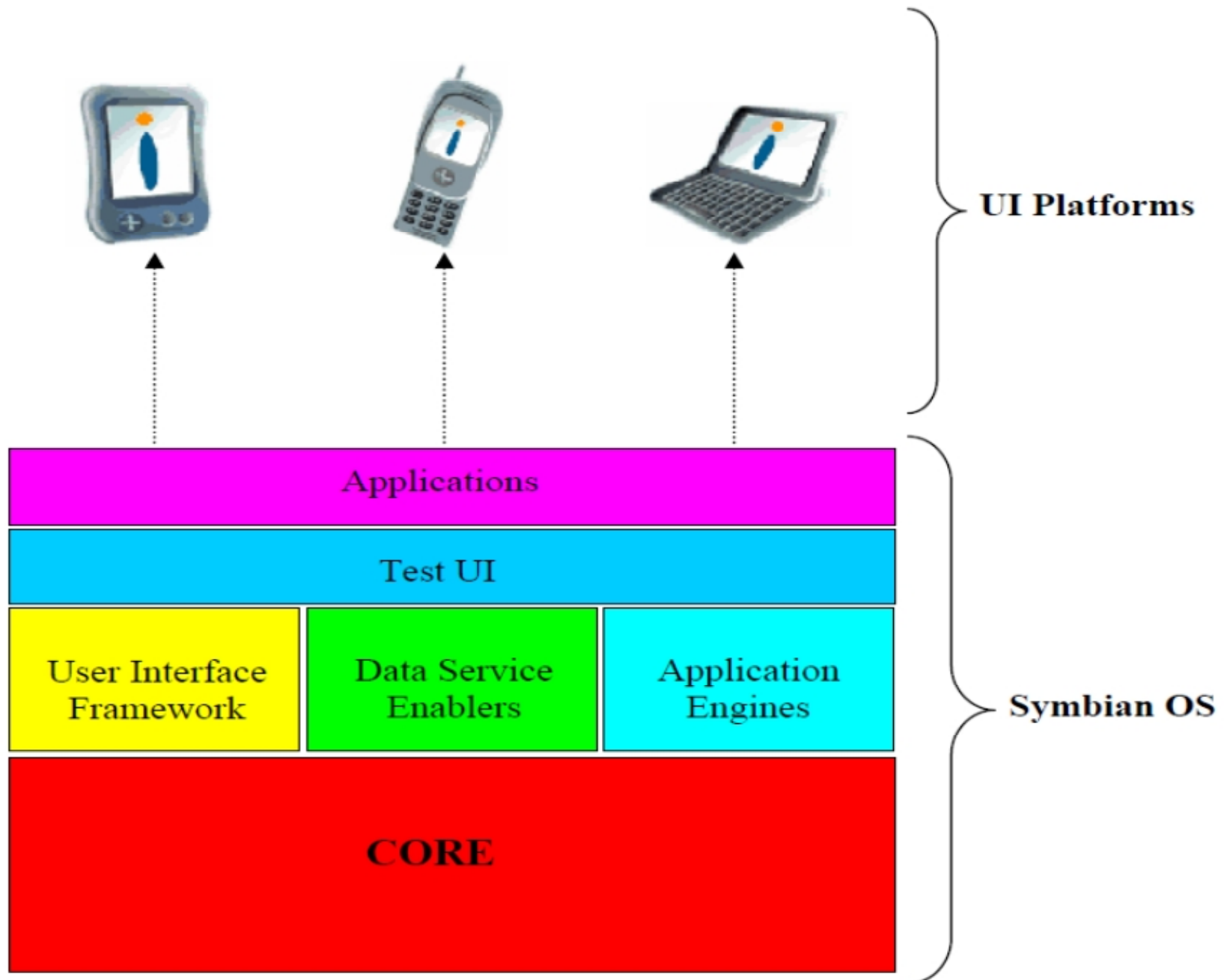
WEAKNESS

- NO VIRTUAL MEMORY

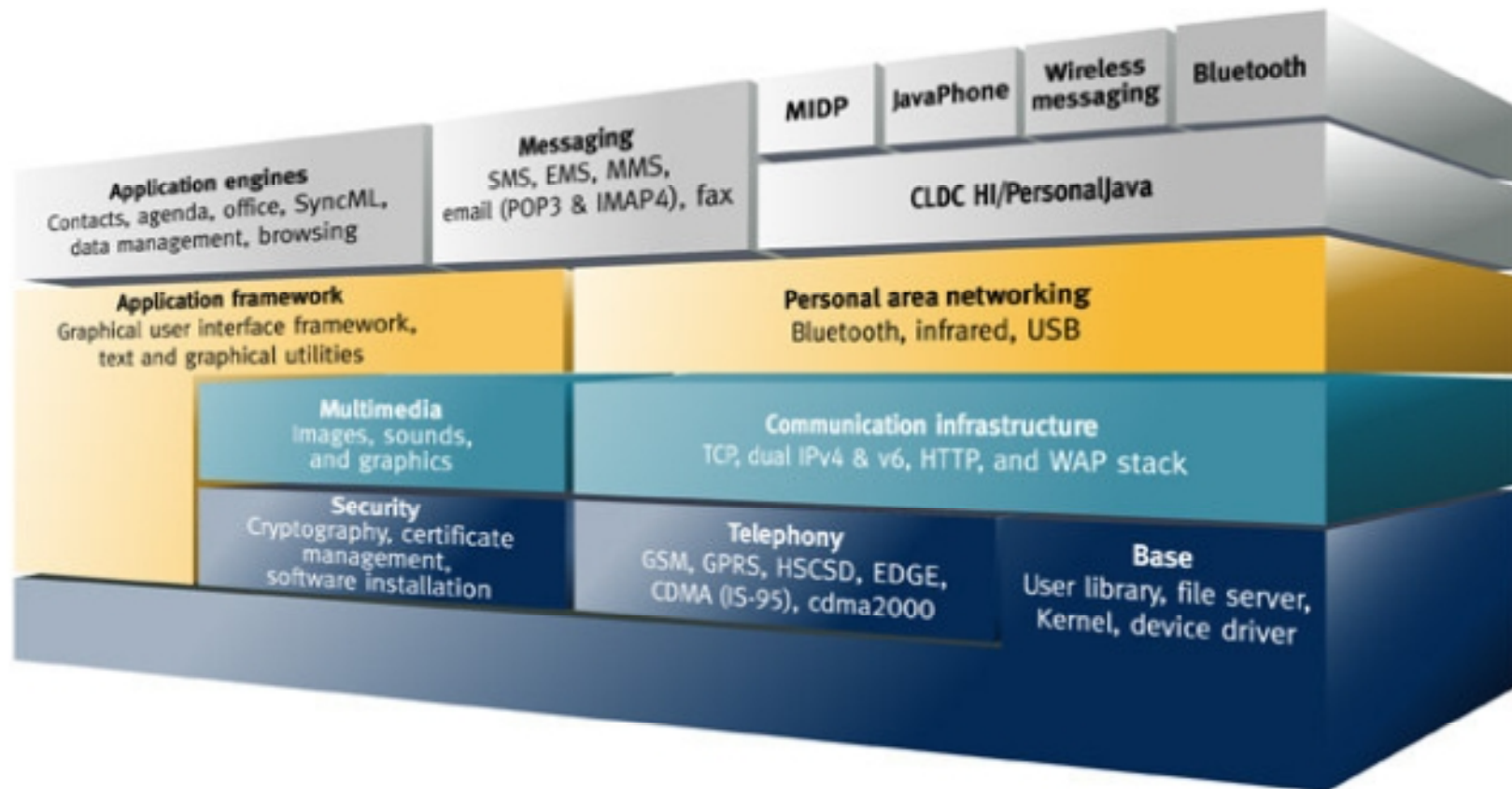
SYMBIAN ARCHITECTURE



- Symbian has a microkernel architecture, which means that the minimum necessary is within the kernel to maximise robustness, availability and responsiveness.
- Symbian is designed to emphasise compatibility with other devices, especially removable media file systems.
- There is also a large volume of User Interface (UI) Code.
- Symbian includes a reference user-interface called "TechView".
- It is very similar to the user interface from the Psion Series 5 personal organiser and is not used for any production phone user interface.



MORE DETAILED ARCHITECTURE



PLATFORM SECURITY



Trust

- Access to private data

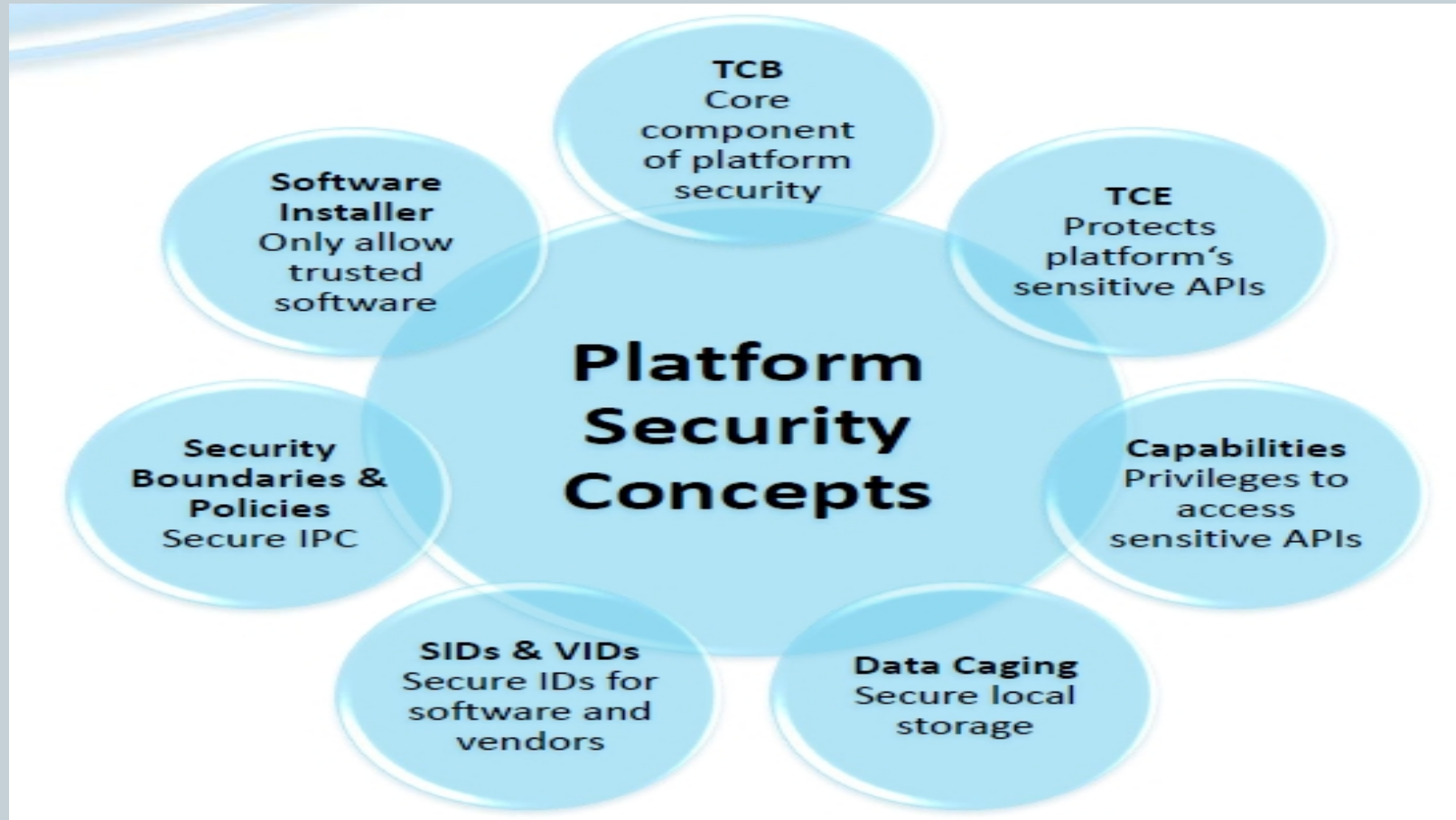
Security

- Cost control
- Compromise important telephone functionality

Protection

- Software ownership
- DRM

PLATFORM SECURITY



Example of Applications where the Symbian OS is being used



- Nokia Series 80 interface
- UIQ interface (Used for PDAs such as Sony Ericsson P800)
- Nokia S60 interface

DEVELOPING SYMBIAN OS



- As of 2010, the SDK for Symbian is standard C++, using Qt. It can be used with either **Qt creator**, or Carbide (the older IDE previously used for Symbian development).
- A phone simulator allows testing of Qt apps.
- It is also possible to develop using Symbian C++, although it is not a standard implementation.
- Prior to the release of the Qt SDK, this was the standard development environment.

ADVANTAGES



- Greater range of applications.
- High quality games.
- Better inbuilt wap browser.
- Connectivity is lot more easier and faster.
- Real Player, Smart movie player etc. sort of application are not available with java phones.
- You can install software and applications of any type
- You can download big files through your phone easily with 3G around.

DISADVANTAGE



- The OS is not available for PCs .
- The Symbian OS can be easily affected by a Virus.