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IMP.next: A Profile for an Embedded World with Increasing Demands

Terrence Barr
Senior Technologist & Product Manager

Volker Bauche
Principal Member of Technical Staff

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Program Agenda

- History of IMP
- Embedded World
- Optionality
- New Features
- New APIs

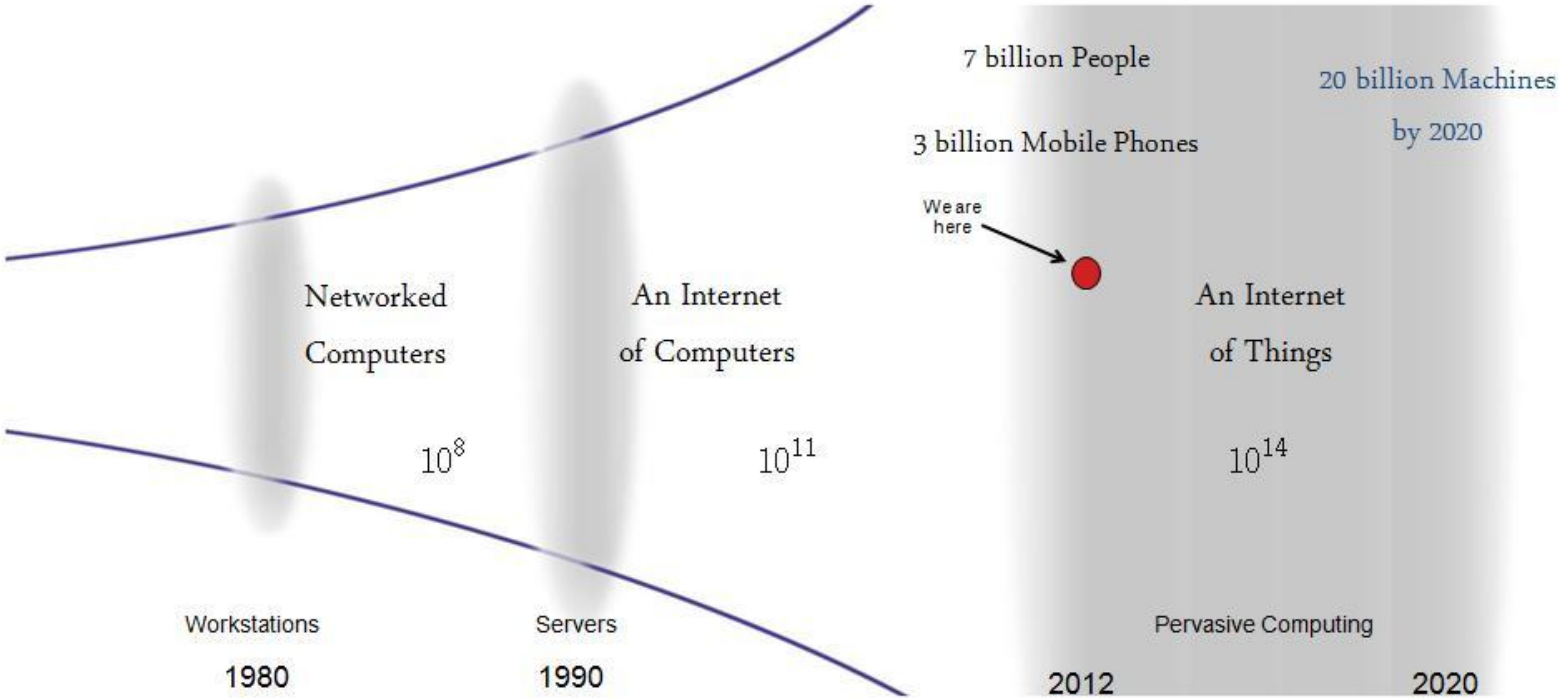
History of IMP

History

- IMP 1.0
  - Final Release 2003
  - Target: very simple embedded devices like wireless modules
  - Based on MIDP 1.0
- IMP-NG
  - Final Release 2005
  - Target: same, but requirements for some improvements, mainly security
  - Based on MIDP 2

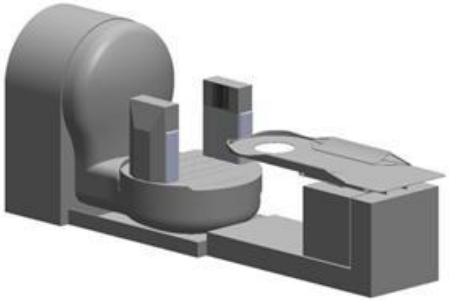
Embedded World

Computing Industry Trend



New Devices, New Markets

Commercial products running embedded software



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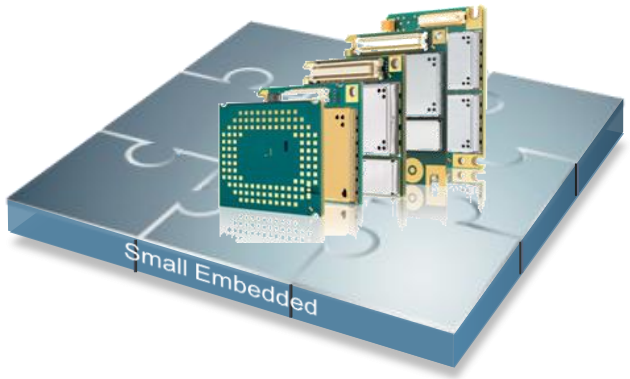
Challenges of Small Embedded Market

- Robust
- Long-life remote operation
- Highly integrated
- In-market values-add
- Intelligence
- Low footprint / power aware
- Up-stack value
- Economies of scale
- Separate HW / SW dependence

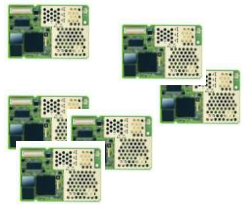


Optionality

Why Optionality?

Broad variety of devices with varying needs

- High-end embedded devices
  - High-end resolution display
  - Several complex applications that need to communicate and to be updated on a regular basis



- Low-end (mass) devices
  - No human interaction
  - Very limited resources
  - No need for advanced features (and no memory space left for it)

What is optional?

- GUI
  - Graphical UI API OR Line-oriented GUI API OR nothing
- Persistent Storage
  - RMS OR Simplified RMS OR nothing
- Media Support
  - Full Media support (JSR-135) OR Audio support OR nothing
- I/O
  - Push Registry, IMC
- AMS
- Power Management

New Features

Optional GUI Support

- For information modules with graphical capabilities only
- Choices:
  - Graphical UI support with menus, commands, images, text fields etc.
    - Multiple display support
    - File Selectors
    - Tabs
    - Touch screen support

  - LUI, a simple API supporting line-oriented displays without canvas functionality
  - No graphical support

Optional Media Support

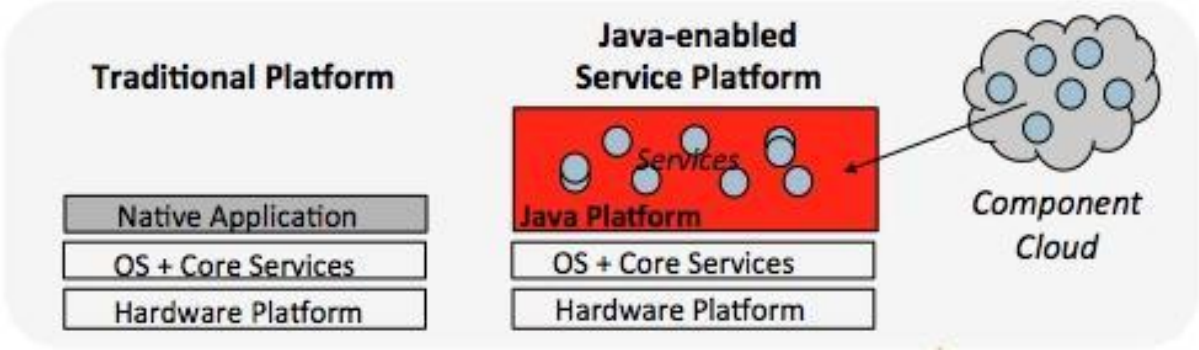
- Choices:
  - Full MMAPI (JSR-135) support (video and audio)
  - Audio-only MMAPI support as in IMP-NG
  - No media support

Optional Record Store System

- Choices:
  - Full RMS support as in IMP-NG
  - Simplified record store system with reduced feature set and reduced footprint
  - No record store system if not needed

Enabling the Embedded Service Platform

- Extend lifetime, flexibility, and value of your solutions
  - Create cross-platform, modular software applications
  - Perform in-field s/w upgrades while maintaining system integrity
  - Reduce device certification and testing overhead

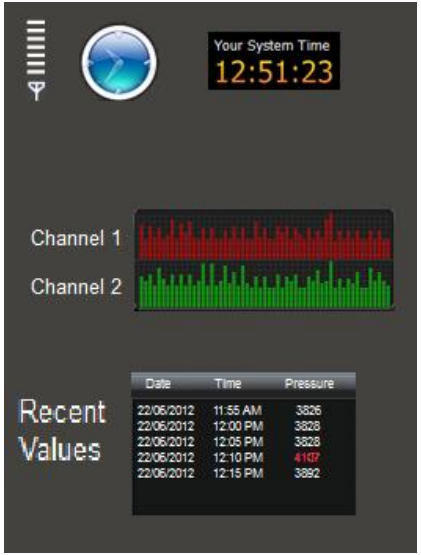


Other New Features (1)

- System and Application Events
- Concurrency
- Inter-IMlet communication
- Shared Libraries
- Multiple IMlet suite signers
- Java SE-like model for permissions
- Fault tolerance

Other New Features (2)

- Notifications
- IMlet types
  - Auto Start IMlets
  - Screen savers
  - Idle Screen IMlets
- Support for Open Type fonts
- Optional extended AMS functionality
- Power Management



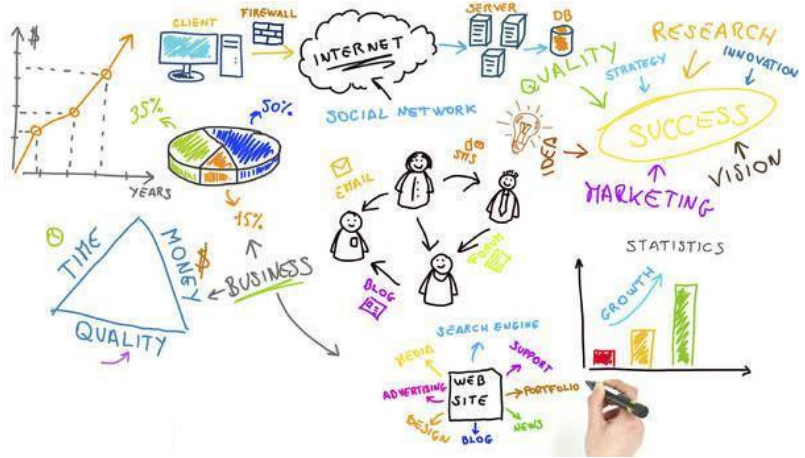
New APIs

Power Management

- Integrated into event management API
- System power states
- Notifications about power state changes
- Access information on
  - Current battery level
  - Estimate of remaining battery life
  - Whether external power source is in use

Extended Application Management API (AMS)

- Provides extended application management features
  - Settings management (system settings and settings per suite)
  - Domain Certificates management
  - Task management
  - Suite management



Line-oriented User Interface (LUI)

- For simple devices owning a line-oriented display only
- Key event support (in case a user input device is assigned)
- Vertical and horizontal scrolling support
- Support of single-line or multiple-line displays
- Support of more than one text color

Simplified Record Management System (SRMS)

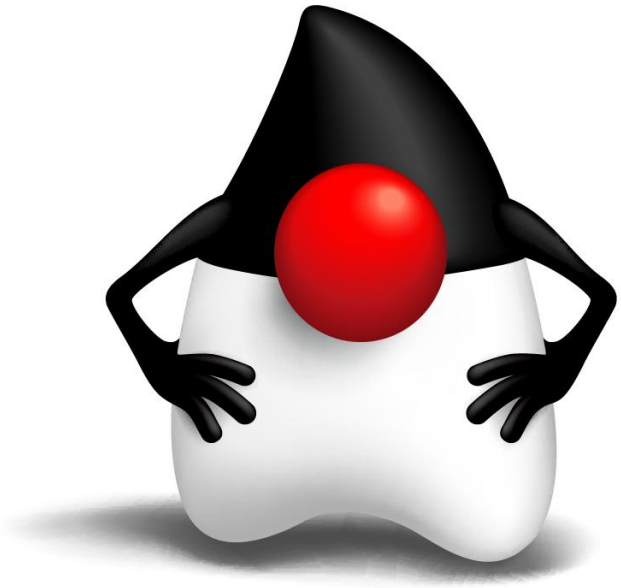
- Simple record store management and access
- Basically same principle as RMS (in IMP-NG), but
  - Smaller
  - Faster
  - For small amount of data (no filters)
  - No explicit authorization mode, so not for sensitive data and/or access by many users

Don’t miss:

- **CON4570**:
  Oracle Java Wireless Client: Optimized Java ME Runtime
- **CON4247**:
  CLDC: The Java Platform for Feature Phones and Low-Footprint Embedded Devices
- **CON11300**:
  Expanding the Reach of the Java ME Platform
- **CON5943**:
  Java ME Service Platform

Additional Information

- Terrence.Barr@oracle.com
  Twitter: @terrencebarr
- Volker.Bauche@oracle.com



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