

JSR 121 for CLDC?

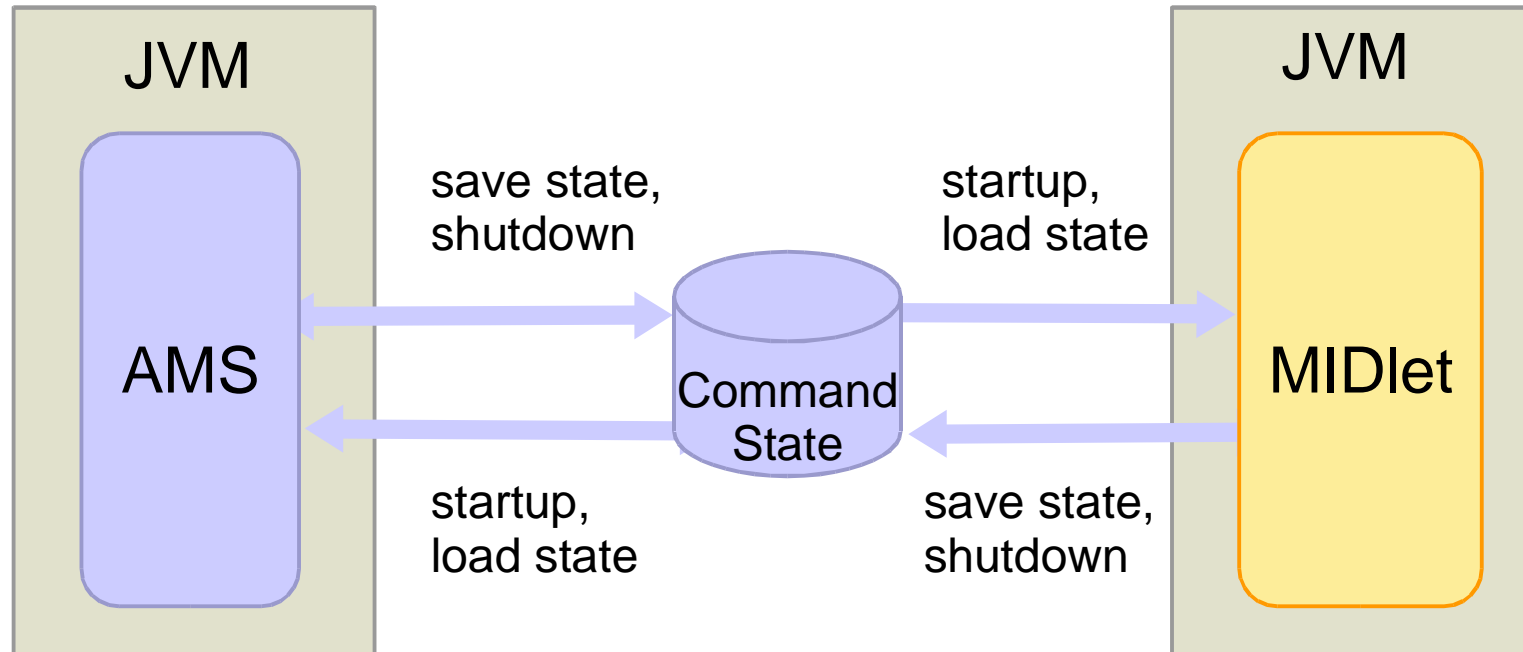
java.sun.com/javaone/sf

Bernd Mathiske

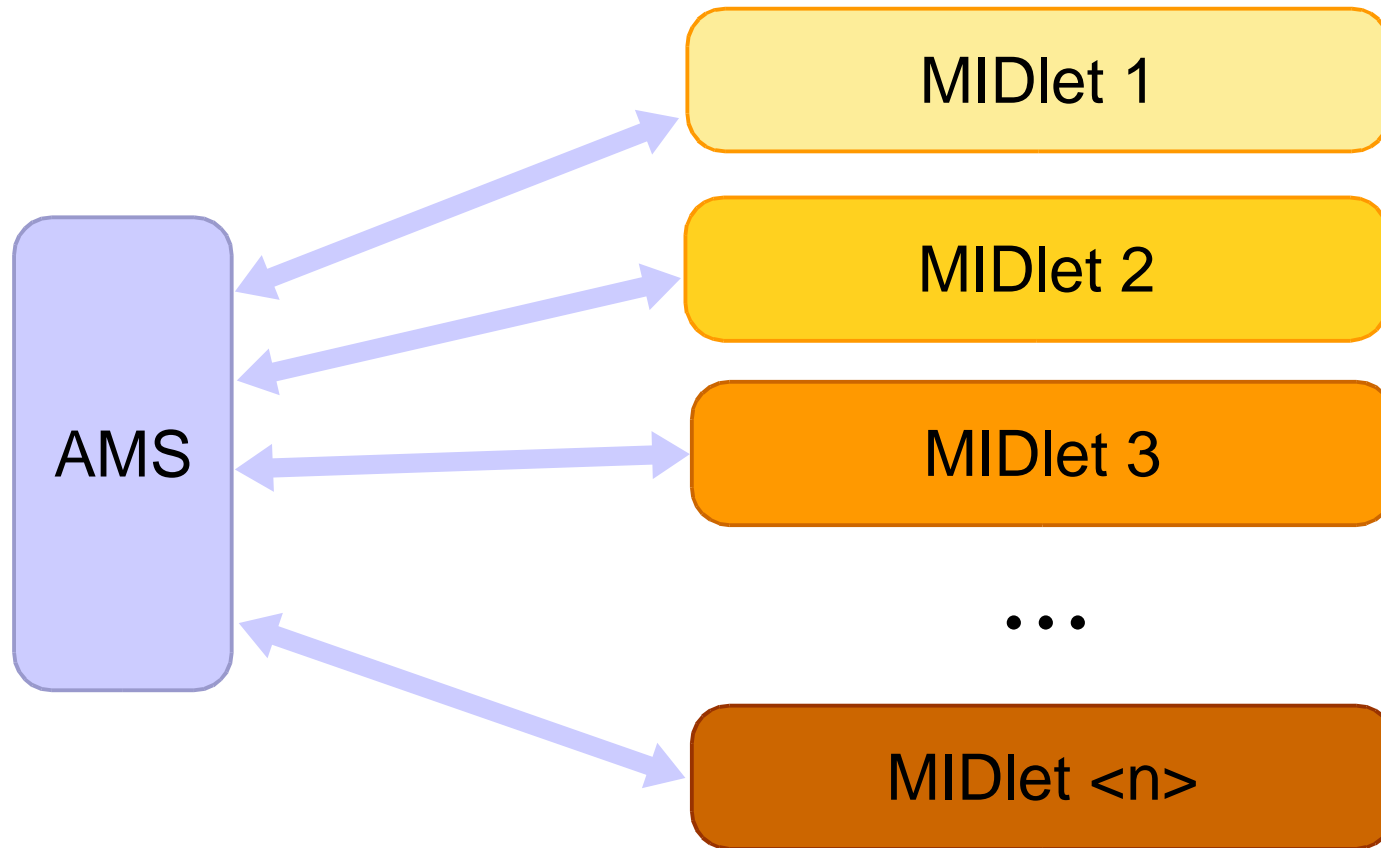
Not an expert



Conventional MIDlet Management



Multi-Tasking MIDlet Management

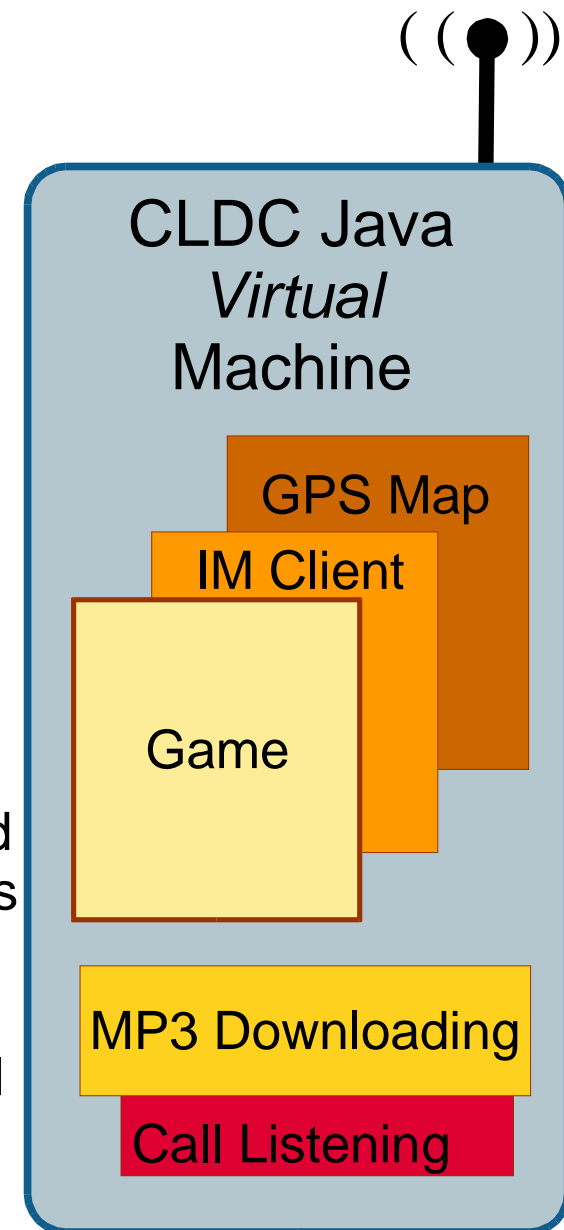


MIDlet Multi-Tasking

- Switch very rapidly between MIDlets
- Centralized screen management
- Concurrent services as Java programs (incoming call listener, downloading, audio streaming, ...)
- Efficient resource management
- No stopping/restarting the JVM
- Quick application startup

Alternating
Foreground
Applications

Background
Tasks



Background Behavior Options

- **Suspended:** (PIM app, arcade game, bill pay, brokerage)
 - Only resume execution when brought into foreground
- **Buffered:** (IM client, strategy game, fractal drawing, map drawing)
 - Computation continues in background
 - Graphics output goes to off-screen buffer
- **Reduced:** (clock, stock ticker, buddy list)
 - Relinquish input focus
 - Draw to limited visible screen area (e.g. icon, corner, bar)
- **Headless:** (downloading, audio streaming)
 - No graphics output while in background
 - Full redraw when coming into foreground

CLDC without Serializable

```
interface IsolateSerializable {
```

← CLDC addition

CDC/SE modification

```
interface Serializable extends IsolateSerializable {
```

```
public class Link {  
    ...  
    public IsolateSerializable receive()  
        throws IOException;  
  
    public void send(IsolateSerializable object)  
        throws IOException;  
    ...  
}
```

If you can't change Serializable

Change CLDC instead!

(i.e. wait until it incorporates Serializable in 2.0)

```
public class Link {  
    ...  
    public Serializable receive()  
        throws IOException;  
  
    public void send(Serializable object)  
        throws IOException;  
    ...  
}
```

More Information

- CLDC HotSpot™ Implementation JVM
 - Nachi.Periakaruppan@sun.com
- Isolate implementation (MVM), Isolate Resource Management:
 - <http://research.sun.com/projects/barcelona>
 - TS-3207
- JSR 121 (Isolate API)
 - <http://www.jcp.org/en/jsr/detail?id=121>
- J2ME™ platform
 - <http://java.sun.com/j2me>

If you don't like casts

Wait until there is generics support
(should be any time now...)

```
public class Link<Message> {  
    ...  
    public Message receive()  
        throws IOException;  
  
    public void send(Message message)  
        throws IOException;  
    ...  
}
```