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Title: Embedded Rich Client Applications

Position statement:

Developing applications on rich client platforms (RCP) has a number of advantages. Besides benefits from proven and tested features, RCPs speed up the development process. Most embedded applications suffer from a long development and testing process. Using RCPs in the embedded space can improve quality and shorten development cycles.

Topic outline:

I am working on embedded applications, mostly based on an implementation of the OSGi specification. In this paper I summarize my expectations and requirements for an embedded RCP.

Usually, embedded applications are tightly coupled with their hardware counterparts, making software development a challenging task for every new device. However, most embedded applications share common software requirements. Consider, for example, remote update capability. Remote updates are a critical part in software development since an error in the update implementation can lead to a complete system failure. Moreover, from an economic point of view such a failure can cause an expensive product recall. With RCP, I expect to be able to rely on a well-proven and tested update mechanism.

Another important fact of software is quality and reusability. With RCP, and its underpinning OSGi programming model, developers are forced to develop well-structured (service oriented) software. From my experience I can approve this property of programming with OSGi.

Most embedded systems have limited resources like processor power or memory. Embedded RCPs should be slim and optimized for these constraints. Especially the graphical toolkit should be high-performance.