

# Blinki Mobile Web DevKit Creation Review

## 1. Introduction

The Blinki Mobile Web DevKit (formerly known as FireFly) is a proposed open-source project under the Eclipse Device Software Development Platform. The Blinki project intends to develop an extensible mobile web developer kit for use in creating and testing traditional and next-generation mobile web applications.

FireFly was the original proposed name of this project because a [mass of mobile phones at night](#) resembles a [swarm of fireflies](#). However, due to a potential name clash with an existing product we have revised the project name to Blinki, which is [the Jamaican English word for firefly](#).

## 2. Creation Review

- The projection creation review has been scheduled for **March 18, 2009**
- The communication channel for the review is the [newsgroup](#) . Use the newsgroup to post any comments or to request the review to be held on a conference call.

## 3. Scope

The Blinki Mobile Web Developer Kit will consist of the following extensible frameworks and toolkits, and equally important, educational resources:

### 1. Mobile Web Previewer Framework

An extensible Eclipse tools framework for the creation of mobile device simulators specifically for previewing web content in a realistic WYSIWYG manner. This framework will enable developers to preview web content and services in a simulated mobile device web browser from within an Eclipse IDE. The technical platform will be developed to incorporate WebKit browser support and will be open for inclusion of other browser technologies.

### 2. Mobile Web Debugger Framework

An API and pluggable architecture for supporting the JavaScript debugging capabilities of multiple mobile web browsers. The framework will integrate with the Eclipse debugger infrastructure and provide developers insight into the execution state of their mobile web content and dynamic UI behaviors. Initial development effort will provide debugging support for simulated mobile web environments provided by previewers built on top of the Mobile Web Previewer Framework. Exemplary implementations are planned for the Goggle Chrome V8 and SquirrelFish JavaScript debugger APIs.

### 3. Mobile Web Rendering Kit

Will be composed of a core tier and an API programming tier. The core tier will implement the device-specific widget presentation and interaction customizations using HTML, CSS and JavaScript technologies. The API tier will provide a device-independent web programming API. Both JavaScript and JSP versions of the API programming tier are currently planned, but other implementations may be developed if interested resources are available.

#### 4. **Device Service Access Framework**

Will provide a technology bridge to enable mobile web applications access to real and simulated device services. Common APIs and web components for interacting with primary services will be provided along with a device-side pluggable driver model. Additionally, a bidirectional WebKit-based Java to JavaScript bridge will be created to support the development of virtual device services for testing and simulation purposes. An example iPhone implementation, and possibly a Gphone/Android implementation, of the framework will be provided to support framework testing and to serve as a guide for web application developers. Additional contributions for other devices will be accepted.

#### 5. **Educational Resources**

Educational resources and community development are vital for the success of this project. We plan to develop a series of how-to articles, tutorials, best practice guidelines and webinars for the Blinki community. Additionally, we plan to provide architecture, design and API documentation for developers wishing to extend any of the Blinki frameworks.

### **4. *Out of Scope***

1. IDE Components versus an IDE - This project will provide some of the key enabling mobile web technologies and development tools on the Eclipse platform. These modular components may be combined with other Eclipse-based projects and products to produce a complete mobile web end-user IDE product. However, there are no plans to expand the project scope to the level of a standalone mobile web application IDE. Any such efforts will be undertaken as part of the Pulsar working group.
2. Limited Server-side Concerns - While this project is open to supporting the development of server-side UI technologies such as PHP and JSP custom tag libraries as part of its mobile web UI toolkit concentration, there are no plans to address server-side hosting concerns such as Java EE web application packaging or application server deployment.
3. No Project Model Support Requirement - There is no developer tool project structure requirement in scope for this project. Therefore the technologies and frameworks of this project will be developed as independent and agnostic to any specific Eclipse developer project structure to the extent possible. The Blinki project will provide guidance and support to other Eclipse projects that seek to reuse the work products of this project.
4. No Native Device Application Development Tools - This project will concentrate on supporting web-centric applications. No native application development efforts are planned beyond those required to support the service access and web short-cut installation frameworks.

### **5. *Relationship to Other Projects***

#### 1. **Mobile Industry Working Group (Pulsar)**

Genuitec and its Blinki team members are participating in this working group. A key objective in our participation is helping drive mobile web requirements and concerns in the larger context of the working group.

#### 2. **Tools for Mobile Linux Project (TmL)**

Presently there is no clear overlap between the native application concerns of Tools for Mobile Linux and the mobile web (browser centric) concerns of Blinki. Eric Cloninger, TmL lead, will be serving as a technical advisor to the Blinki team. Through this close interaction we expect to identify any future emerging scope overlap and coordinate our respective projects in a

synergistic manner.

### 3. **Device Debugging Project**

Presently the Blinki technical scope does not overlap with that of the Device Debugging Project. While we do not anticipate emerging scope overlaps due to fundamental technical differences from our target environments we plan to frequently review our JavaScript debugging architecture and designs relative to advances made by the Device Debugging Project. If common interests emerge we will work with that project's leadership in a collaborative and mutually beneficial manner.

### 4. **Platform-SWT and AJAX Tool Framework**

There is potential overlap in the scope of Blinki, ATF and SWT with respect their browser interests. The ATF project has listed support for WebKit on the project's future wish list. Additionally, SWT provides browser integration support through its org.eclipse.swt.browser package. We will initiate a dialog with the respective project leads to coordinate our individual plans with the goal to minimize redundancy.

## **6. Community Awareness and Involvement**

- SD Times FireFly print article, Alex Handy
- [Dana Gardner Blog, ZDnet](#)
- [FireFly Project Blog](#)
- [WebKit for SWT](#) recognition of Blinki/FireFly as the OSS destination
- Mobile Working Group participation
- [EclipseCon '09 Mobile Web BOF](#)
- [EclipseCon '09 FireFly/Blinki Presentation](#)

## **7. Mentors and Advisors**

1. Doug Gaff, Wind River  
DSDP Lead  
Mentor Role
2. Gunnar Wagen, AGETO Service GmbH  
Technology PMC  
Mentor Role
3. Eric Cloninger, Motorola  
DSDP-TmL Project Lead (Tools for Mobile Linux)  
Project Technical Advisor Role (unofficial mentor)

## **8. Interested Parties**

1. Motorola
2. ICEsoft
3. many more .... I have spoken with 5 smartphone device manufacturers that are all following the Blinki proposal development but bureaucracy prevents them from being able to publicly commit.

## 9. Initial Participants

### 1. Wayne Parrott - Project Lead / Architect / Committer (Genuitec, LLC)

Wayne has been researching, developing and delivering commercial Eclipse plugin solutions for the past 6 years. His experience includes development of the first JSP and JavaScript debuggers for Eclipse, seamless reuse and integration of advanced NetBeans features within Eclipse, development of WebKit for SWT and preliminary research prototypes of the Blinki previewer and inspector/debugger features.

### 2. Todd Williams - Architect / Evangelist / Committer (Genuitec, LLC)

Todd has over 20 years of experience had has been the architect for several commercial software products. He has 6 years of Eclipse development experience and will be working on project architecture as well as acting as the technical evangelist to the mobile web developer community.

### 3. Jens Eckles - Marketing and Public Relations / Committer (Genuitec, LLC)

Jens has multiple years of experience in marketing, public relations, and community building. He will be creating compelling website content to generate public awareness for the project, as well as running various community outreach programs.

### 4. Rosario Aguilar - Web Development / Committer (Genuitec, LLC)

Rosario is an experienced web developer and site administrator. Her primary responsibility will be to ensure the project's website adheres to the Foundation guidelines while staying current, relevant, and visually engaging.

### 5. Greg Amerson - Build Management / Developer / Committer (Genuitec, LLC)

Greg is an accomplished software developer, having delivered multiple versions of commercial products base on Eclipse. He has extensive experience developing web AJAX developer tools and expertise setting up and running Eclipse-based product builds which includes working around P2 quirks.

### 6. Brian Fernandes - Developer / Commiter (Genuitec, LLC)

Brian has been developing commercial Eclipse plugins for over 5 years and specializes in Eclipse product architecture and UI design and implementation using SWT, JFaces, and GEF.

## 10. Code Contributions

### • WebKit for SWT (Genuitec, LLC)

Due to Blinki's reliance on WebKit to serve as a platform, this code contribution by Genuitec represents a strategic asset to the Blinki project. We are evaluating an option to release the current 0.5 version which is a separate but similar framework to the org.eclipse.swt.browser.Browser framework or to refactor the architecture to integrate natively with that framework. We will make that decision post EclipseCon after consulting with other project teams. This contribution is expected to be available for IP review on or before June 1, 2009.

### • Anticipated Contributions - Genuitec

In addition to the WebKit for SWT framework contribution from Genuitec, their Mobile Web Technology team is actively developing a prototypical previewer, inspector and JavaScript debugging tools for the iPhone device. We anticipate contribution of these components by Q3, 2009.

### • Anticipated Contributions - Others

We have had many project recruiting discussions with a number of cautiously interested smartphone vendors. Of these, a major mobile device vendor has privately committed to significant contribution of Eclipse mobile web tooling. The anticipated timeframe for this contribution is late Q3 or early Q4 '09.

## ***11. Tentative Plan***

- March 18, Project Creation Review
- March 23-26, EclipseCon Mobile Web BOF & project presentation (20 min talk)
- June - contributed source imported
- July - IP Review complete
- Sept - Mobile Web Preview Framework available
- Oct - Mobile Web JavaScript Debugger available
- Nov - Virtual service access framework available

## ***12. Copyright Statement***

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