

Mashups with Mashlight^{*}

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Abstract. Mashlight is a framework for creating process mashups out of Web 2.0 widgets. In our demo we show how Mashlight can be used to simplify patient management in a hospital. We illustrate the design-time tools for creating mashups, a desktop execution environment, and mobile environments for iPhones and Android smartphones.

1 Mashlight

The web is becoming a user-centric platform. Social networks, video-sharing sites, blogs, and wikis have converted millions of users from spectators to contributors. People use the Web to collaborate, share information, and solve their everyday needs. This ecosystem has placed the grounds for mashups, i.e., applications that combine data and functionality from different sources to meet user goals. Mashlight [1] presents a flexible solution that supports data, logic, and presentation mashups both on the desktop and on mobile devices. It encourages creativity by taking inspiration from widgets, i.e., interactive and single-service auto-contained web applications such as those provided by Apple's Dashboard and Google's Gadgets.

In Mashlight widgets can exchange data and be sequenced in a process-like fashion. Widgets exchange data through input and output parameters, while their sequencing determines the order in which they are presented to the user. For greater flexibility, Mashlight introduces the notion of *super-widget*, an abstraction for aggregating widgets that need to be shown to the user at the same time. Inside a super-widget there is no process flow, and the user is free to interact with the internal widgets in any order; however, there are data flows that allow widgets to collaborate by exchanging information. Externally, a super-widget exchanges data and is sequenced just like any other regular widget.

The "Mashlight Suite" (see Figure 1) provides two design-time tools¹. The "Widget Builder" is an Eclipse plugin for creating composable widgets. The

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¹ The Mashlight Suite can be experienced online at

<http://home.dei.polimi.it/guinea/mashlight/index.html>, while a video can be seen at

<http://home.dei.polimi.it/guinea/mashlight/demo.mov>

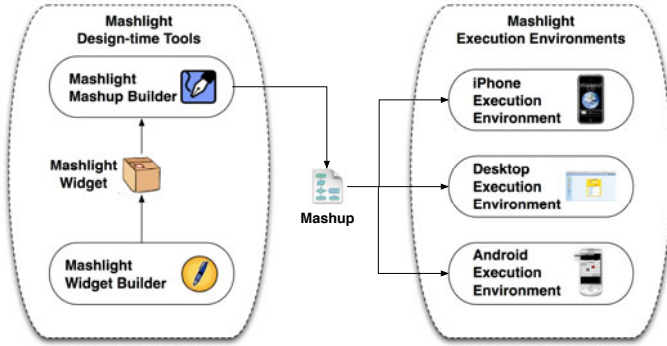


Fig. 1. The Mashlight Suite

“Mashup Builder” provides designers with a drag-and-drop canvas in which they can define process and data flows. Mashlight also provides three execution environments. The first is intended for Webkit browsers and is implemented in JavaScript. The other two environments are intended for iOS and Android mobile devices. For each we have developed special-purpose widgets that take advantage of their capabilities (e.g., GPS geolocation, contact lists, etc.).

2 Demo Proposal

In our demo we improve patient service in a fictional public hospital. Through Mashlight doctors setup personalized management processes for their patients that nurses carry out. Doctors interact with the “Patient Management Process Creator” (PMPC), a mashup created by Mashlight experts that acts as a domain-specific mashup creation environment. Through the PMPC doctors state their patient’s needs; the result is a dynamically generated process for that patient, one that nurses can run on the mobile devices provided by the hospital. The demo will start with a brief overview of the Mashlight Suite, and proceed to present the scenario and its requirements. The demo will then illustrate how the Mashup Builder was used to create the PMPC mashup, and conclude with a presentation of the runtime environments. The PMPC will be executed in a browser, and we will run a personalized management process within an iOS device.

Reference

1. Albinola, M., Baresi, L., Carcano, M., Guinea, S.: Mashlight: a Lightweight Mashup Framework for Everyone. In: 2nd Workshop on Mashups, Enterprise Mashups and Lightweight Composition on the Web - 18th International World Wide Web Conference (2009)