Extending eRoom: An Instinctive White Paper

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Introduction

This white paper describes eRoom extensibility using the eRoom Developer Toolkit. eRoom is a web application for managing fast cycle, distributed projects. It provides teams a large amount of flexibility around the look and feel of each
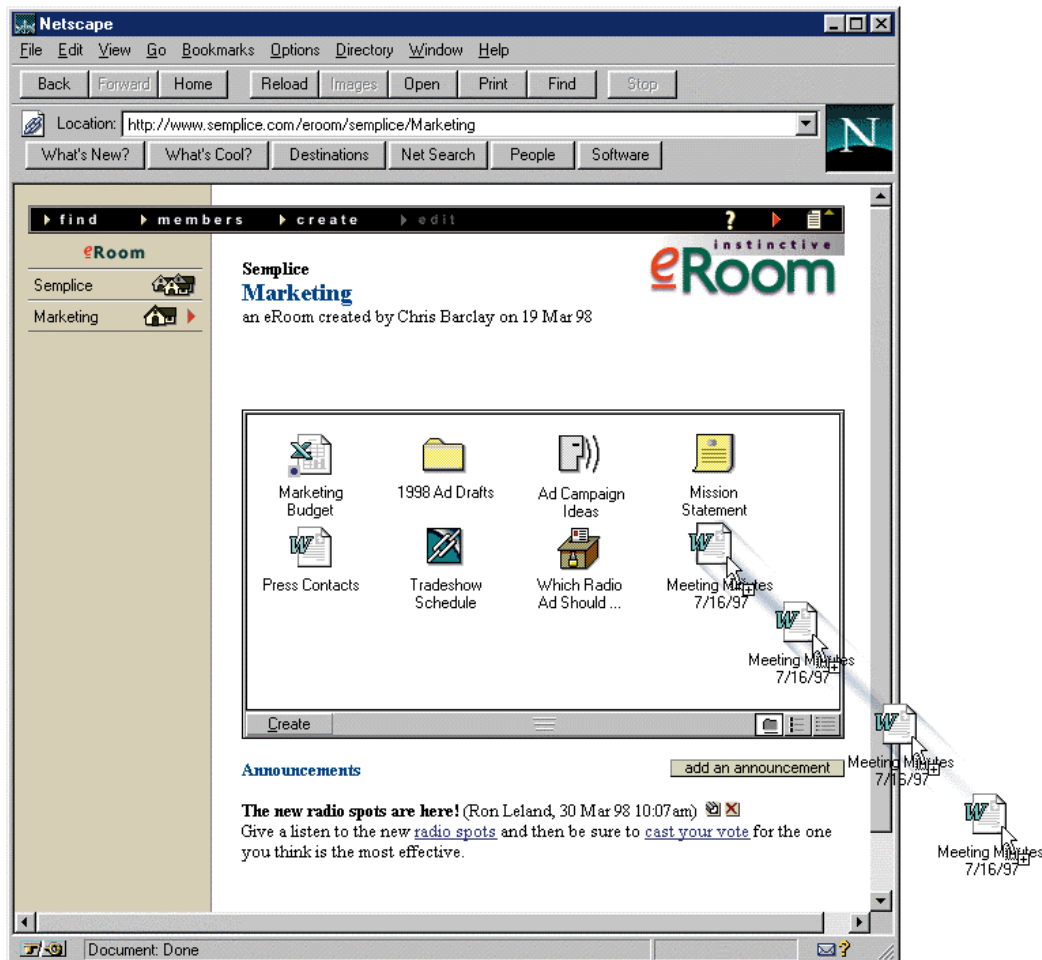

Figure 1

room without requiring knowledge of programming languages or HTML; many customizations are already available through the standard product. However, we recognize users and MIS departments may want to build unique, customized solutions, as well as integrate with existing systems. These solutions may include, for example,

combining eRoom with existing applications, an automated way to add or extract data in an eRoom or extending the functionality in other ways. This document *does not* address customization of the eRoom client, shown in Figure 1.

eRoom Developer Toolkit Architecture

The toolkit is comprised of:

- The eRoom Server Access API, which provides access to all the items a user sees in an eRoom (e.g. discussions, polls, folders and documents), as well as member modification and search capabilities.
- The eRoom Server Extension API, which provides the ability to extend the eRoom server, such as adding new functionality or enhancing existing features.
- Documentation and sample applications.

The easiest way to understand the uses of the toolkit is with an example. Figure 2 describes how the Widget Company is using the API to streamline integration with their existing business rules and applications. Widget makes parts for commuter planes. As such, they want ensure that all documents are under version control to keep the history of changes. Some of their employees currently participate in an Internet news group that provides particularly useful feedback about customer wants and desires. They'd like this information to reside in the project eRoom. Finally, Widget would like to archive outdated information to CDROM.
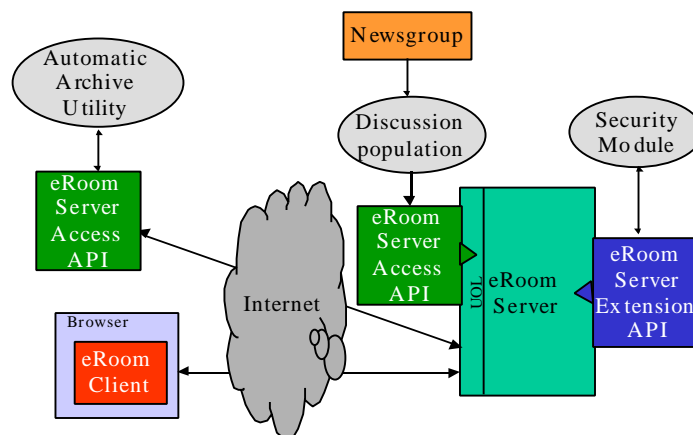

Figure 2

Server Access API

The Server Access API contains high level, easily programmed objects, which provide the ability to programmatically manipulate eRoom objects such as documents, folders, notes, polls, web links and so on. It is a COM automation API; developers can use applications such as Visual Basic and Visual C++ to create applications. Each object, for example a

poll, will have methods associated with it, such as vote. These methods will cause an action to occur on the eRoom server.

Using the Server Access API, a developer can write applications that perform many of the actions a user might perform in an eRoom. For example, the developer can create applications that can:

- Create and delete objects.
- Create and modify members.
- Search and navigate through facilities, rooms and folders.
- Vote in polls or tally poll results.
- Add or edit attachments.
- Import documents into eRoom from Lotus Notes or an Internet news group.

Continuing with the example, Widget uses this access to the eRoom server to create a program that reads information from their favorite Internet news group. The program locates the eRoom discussion and adds the comments, including links and replies, from the Internet news group on an hourly basis. The Widget project leader has already created a folder named *Archive* that engineers use to dispose of outdated files. Files moved into this folder are archived on a nightly basis using another program, which identifies the files, copies them onto the CDROM, and deletes them from the eRoom.

Server Extension API

The Server Extension API provides the ability to act upon events that occur on an eRoom server (e.g. object creation or modification). This allows the developer to extend some of the fundamental capabilities of the eRoom server.

Example applications of the Server Extension API include:

- A report generator that tracks activity in an eRoom over time.
- A notification mechanism that sends a page or fax when an event of particular interest occurs
- Synchronization of eRoom information into another data repository
- Workflow automation (e.g. move a poll to an "approved" folder when enough votes have been cast in favor of the proposal)

Here's how Widget could use the API to extend eRoom's auditing. When a user routes an object through an issues process, the routing activity triggers a Widget program that adds the user's login name and the approval time to the document.

The two APIs may also be used together. For example, a company may wish to turn on version control for all documents. Using the Server Extension API, a program will be run when a document is created in the eRoom. This program can then use the Server Access API to toggle version tracking on if the user has not already set it.

Conclusion

As users come to depend on Instinctive Technology's eRoom to share documents and vital project data, they and their MIS departments will seek to integrate eRoom with other information systems. Instinctive is committed to supporting users' needs to extend and customize eRoom through APIs that enable rapid and easy development of custom solutions.

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