



## **Fractal Conceptual Prototype: the Extensions Marketplace**

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### **Keyword(s):**

content management. ECM, cloud applications, collaboration

### **Abstract:**

Fractal is a research project that seeks to develop on-demand content management as a service, specialising in helping users in different organisations to collaborate. This report describes part of our conceptual prototype, a working system developed to help clarify our vision and understand today's content management platforms. It demonstrates the key ideas of a multi-tenanted content management service that is extensible and allows rapid adoption and customisation. This report presents the Extensions Marketplace, a community that allows users to discover and market useful applications and tools for customizing Fractal.

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# Fractal Conceptual Prototype: the Extensions Marketplace

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Fractal is a research project pursuing a vision of a highly customizable content management service. With Fractal we want to change the way people work with content: how they create it, manage it, collaborate and interact with it. Part of this vision is the extensibility of Fractal using extensions shared and discussed by the community in the *Extensions Marketplace*. This report and the accompanying video [1] present a conceptual prototype of the extensions marketplace.

Fractal provides users with *content spaces* - collaborative workspaces in the cloud related to a particular team, task or topic. Content spaces let you manage your content securely and visualize collections of content in different ways. They can be completely customized by adding extensions that provide new features or applications for collaboration, content processing or other tasks.

A key element of the Fractal ecosystem is the extensions marketplace, where users can adopt extensions that enhance the utility of their content spaces. The marketplace is also a place to comment and discuss experience of using particular extensions. Fractal will provide open APIs and allow third party developers to create these extensions. To developers, Fractal will be both a platform to leverage in their applications, and a marketplace where they can place their work for use by others, choosing a pricing model appropriate for them.

We created a conceptual prototype at the end of 2008 to visualize the Extensions marketplace and other key parts of Fractal. It helped identify the technical challenges involved in constructing a scalable and user friendly service. The prototype also allowed us to clarify our vision and understand today's content management platforms. Although not a polished or complete service, the conceptual prototype illustrates the idea of the Extensions marketplace, as we show in the accompanying video [1]. This report also provides a description of the Extensions marketplace using the same example scenario shown in the video.

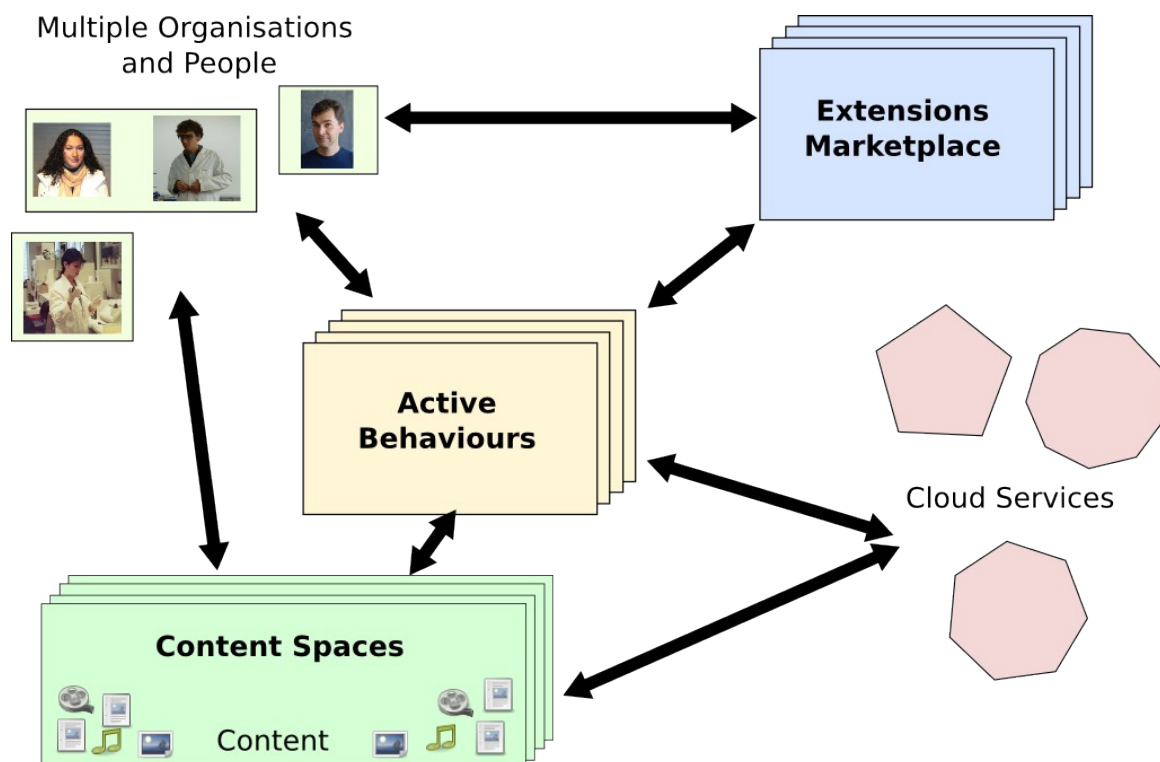


Figure 1: Core parts of Fractal and their relationships

## Additional Materials

In [2], we describe our experiences creating a conceptual prototype based around current technologies, and give reasons why cloud-based content management services require entirely new technologies. The overall vision for Fractal that was explored with this prototype is detailed in [3].

Figure 1 shows the key parts of Fractal explored by the conceptual prototype. One type of extension available in the Extensions marketplace are Active Behaviors, functional extensions to a content space that can respond to user input or changes to content and coordinate a number of cloud services, human tasks and content processing steps. As well as this video and report, we have produced videos and reports that introduce content spaces [4] and show an example active behavior.

## The Scenario



Figure 2: Team members in our example scenario, the UTS-Alpha project

This report makes use of a scenario to demonstrate the idea of the marketplace. In this scenario, Phil Bigg - a project manager in Big Pharma Corp - has created a new content space for the UTS-Alpha project. Some time has now passed and the Content Space has seen some use. The site colleagues dashlet shows that the users invited by Phil Bigg have accepted their invitations and are now members. There are now items visible in the recently modified documents dashlet, and another dashlet shows some recent activity across the entire site.

The advisory board for the UTS-Alpha project are now asking Phil to produce a monthly project report detailing the team's progress. Phil hates red tape, so he wants to find a way to automate some of this process.

From the dashboard, the extensions dashlet can be used as the way to manage functional extensions to the content space. To start with, there are currently no extensions installed, so Phil decides to see if there is an extension that might fit his requirements by navigating to the Fractal Extensions Marketplace - a Content Space much like any other, with its own wiki, discussion forums, etc. These tools allow the community to share their experiences of extensions available in the marketplace, including Fractal applications. The marketplace provides a system for users to rate applications, and for developers to choose a pricing model for their applications that is processed automatically in Fractal as people adopt them.

An extension browser fills the marketplace's front page, and provides many ways to visualize data about extensions to maximize potential for discovering relevant extensions. Users can use free-text search, a timeline view of latest extensions, or filter based on different facets of data using a faceted browser. A tiles view provides more detailed information about each extension.

Having found a “progress report application” that looks promising, Phil checks some adopter reviews to see what other people think of it. Since the comments are positive, he checks the documentation to make sure the extension matches his requirements. Documentation and comments are provided by the developers and users of the extension. Now that he is confident the extension will do the job, Phil installs the application into his content space so he can use it to help produce the progress reports as required by the board.

This particular application provides its own dashlet, and Phil can customize where this appears on the dashboard. The next video shows how the application is integrated into the Fractal content space [5].

## **Summary**

In this demo we described how users can add extensions that provide additional tools or functionality within a content space. We showed the Fractal Extensions Content Space, which is a marketplace and community for developers and users to publish, share and communicate experiences around different extensions. In this marketplace, Phil discovered a progress report application, which we will describe in the next and final report of the series.

## **References**

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