

# RDFRoom – In an Angular Place\*

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**Abstract.** A lone soldier has been stranded in an alien world, filled with resources, literals and shifty anonymous nodes. Room upon room are filled with named graphs – can he find a way out?

RDFRoom is an isometric RDF viewer. It gives the user ways to view and manipulate his RDF data that might make him see the data in a brand new perspective.

## 1 Motivation

The ideas for RDFRoom came together from many different sources of inspiration. Most recently was Danny Ayers' post about the *Web of World Craft*<sup>1</sup>, where he speculated that Web is best suited for displayed document or database “shaped” data. Since RDF can go beyond that, and describes things, not just data, the current World-Wide-Web paradigm will always have trouble displaying such graph-based information, and games might be a better candidate for representing such information.

An earlier source of inspiration was a conversation with colleagues in the DFKI Knowledge Management lab, where it was noted that finding things in a computer-game is much easier than in the folder-structure on your harddisk. Personally I reorganise my folders ever so often, but I still lose documents quite regularly. If I could put my files in a 3D world I know well – I would always remember that the PDF of my CV goes under the stair by the rocket launcher, and last year's tax-returns go with the mega-health.

Two pieces of previous work were also crucial for the ideas of RDFRoom. Firstly, Dennis Chao's psdoom [1], a version of Doom where processes running on a machine appeared as monsters in a doom level and killing them meant killing the process. His paper also contains several good observations about the effects of using such a user-interface. Secondly, Liam Quinn wrote an RDF based adventure game (RDFG)<sup>2</sup> where the world and the objects in it are described in RDF. In Liam's game the world was carefully scripting beforehand, but in RDFRoom the world is the web itself, although the game is admittedly more pointless than RDFG.

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\* Thanks to Danny Ayers for the title

<sup>1</sup> <http://dannyayers.com/2006/03/26/web-of-worldcraft>

<sup>2</sup> <http://dirk.holoweb.net/~liam/rdfg/rdfg.cgi>

A third source of inspiration was the IRC Client Colloquy<sup>3</sup>, which plays a shotgun sound effect when people are kicked from a room. This makes for very satisfying and immediate feedback and does also highlight the seriousness of the action. We wanted RDFRoom to mimic this feedback when deleting nodes. Put together with the recent interest in RDF browsers and browsable data [2], these things made me spend a few evenings coding RDFRoom.

## 2 Overview

RDFRoom represents a graph as room in an isometric world. One node of the graph is used as the starting point - this is either specified by the user, or RDFRoom will pick the node with the most out-going edges if no node is specified. Each node is represented by an object in the world, there are default “blobs” for resources, literals and anonymous node, and to make the world more interesting typed objects have appropriate graphics, for example, *mailto:* URIs are shown as e-mails, *foaf:Person* as characters, etc. Additional types can be added through RDF style-sheets. The player can walk around in the world, and inspect and re-arrange the nodes. *rdfs:seeAlso* links are used to generate door to other rooms, representing other graphs. Door where the *seeAlso* link cannot be loaded, because of HTTP errors, etc. will be shown as closed.

## 3 Technical Details

RDFRoom was implemented in about 10-15 hours, using Python, PyGame<sup>4</sup>, the fantastic RDFLib<sup>5</sup>, and the isometric engine Isotope<sup>6</sup>, modified to allow an RDF based world.

## 4 But Why?

That is a very good question, and RDFRoom might be a good candidate for the most useless code I’ve ever written. However, the question could equally well be “Why not?”, and at least I had fun in writing RDFRoom. I also think there is at least traces of a serious message here, and maybe it will make people think of different ways to view data than the document paradigm.

## References

1. Chao, D.: Doom as an Interface for Process Management. In: Special Interest Group on Computer-Human Interaction. (2001)
2. Berners-Lee, T.: Browsable data. Invited Talk (2006) <http://www.w3.org/2006/Talks/0302-browsedata-tbl/>.

<sup>3</sup> <http://colloquy.info>

<sup>4</sup> <http://www.pygame.org>

<sup>5</sup> <http://rdflib.net>

<sup>6</sup> <http://www.webalice.it/simon.gillespie/Isotope.html>