Implementing RxNav, a RxNorm Browser

Kelly Zeng, Olivier Bodenreider, Stuart J Nelson

U.S. National Library of Medicine, National Institutes of Health, Bethesda, Maryland, USA

The RxNorm Navigator1,2 (RxNav) is a browser that allows users to query the RxNorm3 database by any of its components (ingredient, clinical drug, brand name, etc) and displays all the information related to a given component on a single page, as illustrated in the example shown in Figure 1. RxNorm data are extracted from the Unified Medical Language System® (UMLS®). The client/server architecture was chosen over a local installation of the data because drug information is updated frequently. RxNav is implemented in java and makes use of several open-source software resources, including Java Web Start, Apache Axis, Apache HTTP Server and GSpell. More specifically, the Apache HTTP Server hosts all the application files; Java Web Start serves as the deployment mechanism; the spelling suggestion module, based on GSpell, is implemented as a web service via Apache Axis. These open-source software components enabled an efficient implementation, and a flexible and extensible architecture. Fast and reliable, RxNav has been in increasing use since its launch in September 2004.

1 http://mor.nlm.nih.gov/download/rxnav/

Figure 1—RxNav Screenshot for Cetirizine