

Bellcore's ADAPT/X Harness System for Managing Information on Internet and Intranets

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Adapt/X Harness is an information integration system, platform, and tool set that provides integrated and seamless access to heterogeneous and distributed information in a networked environment (LAN, WAN, Intranets, and the global Internet). It allows cost-effective access, *keyword and attribute* queries, navigation, and linking and operations on these information resources using popular Internet browsers without requiring any translation, transfer, or rehosting of the original information resource.

Information resources such as text and multimedia documents, files of various types, software applications, relational databases, email messages, and references can all be "registered" with Adapt/X Harness and are organized into collections. Information consumers can then use a standard WWW browser to search for required the information with specific (keyword or attribute) queries or they can browse through a "repository" looking for items of interest. Once the useful information is found, the user may use that information as needed; the Harness server would automatically launch the appropriate application or tool (e.g., Word Processor or Spread Sheet) for viewing, printing or using that information. Because the Harness servers talk HTTP, separate httpd is not needed for providing access to the information resources.

The Adapt/X Harness platform is extensible for easily supporting new information types without re-

compilation. Similarly users can add support for any indexing technology. WAIS, Glimpse and Excite are used currently. Two examples of production applications are as follows.

The AXESS system makes client-specific product information stored in legacy information system available via a WWW Adapt/X Harness. In a typical situation the system services about 70 customers/products with approx. 15,000 documents. This translates into a collection space 70 wide and 4 levels deep with more than 2,000 collections.

The LS Web system makes Common Language documents available over the WWW. In this service Bellcore establishes and maintains standards and ontologies for various areas in the industry. This enables clients in different areas of the world achieve better technical understanding. Clients around the world with Common Language accounts are able to access new and updated documentation maintained by the Common Standard. The data in this case exceeds 1 Gigabyte and is very sensitive. Adapt/X Harness supports the required security features.

Additional information on this product can be found at <http://www.bellcore.com/ADV-bin/jclient?page=harnhome.html>. In the related research project, the InfoHarness System for Scalable Search of Heterogeneous Information (<http://lsdis.cs.uga.edu/infoharness>), research has been performed to support (a) attributed-based access as a complement to keyword-based access, (b) improved scalability through access to multiple repositories with independent indices of the same type, and (c) improved quality of results using multiple (different) indices on the same data. Team members of the InfoHarness research prototype developed at Bellcore on which this product is based included Leon Shklar, Amit Sheth, Kshitij Shah and Vipul Kashyap. Adapt/X Harness product is developed by Bellcore's Internet Information Management Product group managed by Satish Thatte with Kshitij Shah as a key technical architect/developer. All opinions expressed here are of author's.

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