

## Places to Go: Intute

by Stephen Downes

"A long wait," writes Graham Attwell. "But worth it" ([2006](#), ¶ 3).

Attwell is reacting to the July 13, 2006 launch of [Intute](#), an online service that provides free access to a wide range of well-selected Web resources for educators and educational researchers. Created by a network of British universities and the Joint Information Services Committee ([JISC](#)), a federal British initiative, Intute represents what learning object repositories were meant to be but never became, as Attwell's remark attests. As noted by the Intute site managers, "Automation can't replace our human value judgments, nor can it be responsive and dynamic to meet the real needs of UK HE [higher education] and FE [further education]—but Intute can . . . You can explore and discover trusted information, assured that it has been evaluated by specialists for its quality and relevance" ([2006](#), ¶ 4, ¶10). This claim is borne out in the design and features of the Intute repository, a project that signifies a decisive step forward in the online dissemination of educational resources and scholarship.

The Intute Web site's apparent simplicity belies its complex construction, but an exploration of the [home page](#) is the best way to begin. A visitor will first notice Intute's four major subdivisions—Science and Technology, Arts and Humanities, Social Sciences, and Health and Life Sciences—presented as four major panels across the top of the page, each clearly color-coded.

Entering one of the sections—perhaps the "green" one, [Social Sciences](#)—leads to a simple page that allows the visitor to search or browse by headings. A navigation menu appears in the left column, with news and features appearing in the right column. Readers will find this layout immediately familiar; it is typical of sites across the Internet. New visitors will dive right into the center column while repeat visitors will focus on the news at the right.

A reader may click on one of the subheadings, perhaps [Economics](#), and be greeted with a further list of subheadings. At the bottom of this list, a new item appears; in this case, the page provides a notation that reads "Editors: University of Bristol, University of Newcastle upon Tyne." Following the [link](#) to this notation reveals the first major feature of Intute: information about the editors who select the best material from a given discipline.

Clicking on one of the further subheadings, such as [Macroeconomics](#), brings the reader to the first set of resources, a list of further subheadings, and a list of related sections. As always, the search function is available, as is a [thesaurus](#). Each resource listed includes a title link that takes you directly to the resource online, a link to the full record via the details icon, and a bookmarking tool via the checkmark icon. The [full record](#) displays some basic information (also known as metadata) about the resource: when and where it was published, who wrote it, what type of resource it is, what format it is in, how it is classified, and more.

At this point the reader may be thinking that this is just another repository. The resources are invariably offsite, located at universities and agencies around the world, but there is nothing unusual in this. The resources are screened by qualified editors. But again, this is not that unusual; [About.com](#) has been using human editors for years, and in the academic world, professors have been informally collecting lists of recommended resources since before the Web was born. Click, though, on the [A to Z of Services](#) link from the main page or any of the subpages, and a very different picture begins to emerge.

The main site's list of services is almost too overwhelming; it is usually easier to focus on a particular section,

such as the [Social Sciences List of Services](#). And the first item that greets the reader on this page is a seemingly unacademic service: a blog. The [Social Sciences Blog](#) lists news and events from the social sciences, new entries in the repository, and more, depending on the interests of the writers. Though the blogs are not sufficiently detailed (we would like to see blogs within subcategories—for example, "Economics" or even "Macroeconomics"), the service nonetheless puts a human face on the otherwise sterile repository.

Some of the other services become immediately apparent. The [Conferences and Events](#) page, for example, is exactly as advertised (though it does impose an additional step to locate conferences rather than immediately displaying a list). The [ePrints](#) service links to a list of Intute projects produced in collaboration with other institutions; in this case, the objective is to make institutional listings of academic journal publications (or ePrints) accessible to Intute's search service.

One of Intute's major innovations—and the service that separates it from previous repositories—is the [Harvester](#). This service is an automated computer program that contacts remote databases and retrieves records of newly created resources. The records contain the basic information, or metadata, of these resources, which is then stored in Intute's database. The resources themselves remain where they are, scattered across the Web, not transferred until they are needed.

What makes this possible is that many other repositories and content services have begun to list their resources in XML. For example, services using Open Archives Initiative ([OAI](#)) (cf. Downes [2003](#)) typically provide metadata in the [Dublin Core](#) metadata format. More complicated metadata, such as the Metadata Encoding and Transmission Standard ([METS](#)), is used by more specialized services. Other repositories, such as [MERLOT](#) and [CAREO](#), make metadata available in RSS. The growing use of such XML-based metadata formats is significant because it means that a service such as Intute can index all these resources automatically.

How this directly helps the reader is easily evident in the [search](#) function. A [standard search](#) will reveal resources reviewed and selected by Intute's editors. A [search using the Harvester](#), however, reveals many more resources collected from the many harvested repositories. Thus, Intute combines the precision of human editing with the scope of a harvest-based search.

Just as Intute gathers data from services around the Web, it also provides data to other services. The [Working With Intute](#) page provides advice for developers wishing to include Intute data on their own Web sites or with their own services. For example, [Embedding Intute](#) provides details of the [RSS](#) and [OAI](#) feeds that may be accessed by other services. Alternatively, developers can place an [Intute search](#) in their Web site. Additional [metadata services](#) are being investigated as well.

What Intute represents is a turning point in the sharing of academic resources. Previous efforts to develop repositories, including learning object repositories, have adopted the federated system whereby repositories are linked into what amounts to a closed network with access to resources protected via a common network login (such as provided by [Shibboleth](#)). The network search, meanwhile, would scan each repository, one by one, any time a search was made. This approach protected proprietary resources that may have been owned by another institution, but it did so at the expense of making the search very slow; simultaneously, it excluded many materials from the wider Web that would have been of interest to educators.

Intute, therefore, is the first of a new generation of repositories, creating loose associations of resource providers, not through a secure and tightly connected network but rather through an open and shared collection of metadata resources. The academic network is therefore designed along the same model as the wider world of blogs, online news articles, and content management systems—and can both feed into and collect resources from that wider world. In this way Intute not only helps teachers, but it also helps students (whether enrolled in an institution or learning informally at home) and other service providers worldwide—all at no cost.

Intute software has not yet been released; however, Intute Executive Director Carol Williams writes that "UK repository search service work (delivered in partnership with [UKOLN](#) and [SHERPA](#)) is about to start its next phase and the intention is that we take a proactive approach to dissemination," which will include the provision of open source software (C. Williams, personal e-mail, August 1, 2006). It is difficult to imagine what an interconnected network of sites such as Intute will look like—but the prospect is an exciting one.

## References

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