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The CHRIS Database Project: A Country-specific Human Rights Information System

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1. Introduction: Why?

The issue of human rights materials on the world wide web (WWW) raises three immediate questions: why? what? and how? Why? interrogates the utility or otherwise having such material available on-line. What? investigates the choice of materials best calculated to enhance human rights promotion; and how? examines information technology (IT) issues germane to the area. This paper presents work-in-progress on one attempted answer to these questions: CHRIS a country-specific human rights information system, which aims to define standards for the presentation of databases of national human rights materials on the WWW.

Recent years have seen a rapid expansion in the electronic availability of human rights materials. The WWW now hosts a significant number of sites in this area, several of them containing databases, thus greatly facilitating the dissemination of human rights information, at least in the industrialised world. Some sites are primarily concerned to provide information on the organizations that created them, others provide material on a thematic basis. As regards the latter, an important distinction can be drawn between events-based and law-based sources. Events-based sources record alleged or proven violations, whereas law-based sources are concerned with the standards by which alleged violations can be judged, but do not themselves make such judgments. The legal standards in question can be national or international, and the material included can be primary (the actual legal instruments), or secondary (commentaries, monographs etc.).

International law-based sources now have a strong presence on the WWW, perhaps the best example being the set of US-based, DIANA databases. By contrast, national legal materials are much less readily available, and there is a great deal less systematization in the presentation of such material as is accessible. The states of Emergency Database developed in Queen's University Belfast represented a ground-breaking initiative in this field, but its narrow focus meant that it covered only a small part of the spectrum of human rights concerns.

Making national legal materials in the human rights field easily accessible on the WWW, as the project under discussion aims to do, could help in human rights advocacy in a number of ways. Firstly, having these standards available could facilitate assessment of the formal legality at the national level of administrative practice which it is claimed is violative of human rights. Secondly, easy access to national legal materials could facilitate monitoring by human rights advocates, academics, non-governmental organizations, and journalists world-wide, of compatibility of the country's laws with international standards. Thirdly, easy access should facilitate comparative examination, and thus allow planners to learn from best practice elsewhere. Finally, such access should assist the work of international human rights bodies (such as the UN Human Rights Committee) when engaged in the periodic reviews of countries' human rights performance stipulated by international human rights treaties. In virtually all cases, the gain would be maximized if agreement could

be reached on some degree of standardization in presentation of materials, thus facilitating comparative and on-going review. Not to do so would mean that each site developer would need to reinvent the wheel each time a country-specific database were created.

Two related possible criticisms of country-specific law-based databases need to be addressed. The first is that since human rights violations are always specific events, the creation of a non-judgmental, legal database is a futile exercise, since by definition it ignores the events, and therefore the violation. To this it can be countered that human rights advocacy requires a knowledge of the law in question. A particular alleged violation by a state may be in accordance with (or indeed required by), a national law, or it may be an administrative act which is in conflict with national law. If it is in accordance with or required by national law, that law is incompatible with international human rights standards and its incompatibility is highlighted by its inclusion on the database. If on the other hand, what is in question is an administrative act which may not be in accordance with national law, then, as discussed above, reference to that law points to a possible double challenge to the act in question (and therefore to the alleged violation): challenge before national tribunals and in the international arena. This will need to be a progressive process, as most international human rights remedies require the exhaustion of domestic remedies before claims can be entertained at the international level. In either case, having the primary legal material germane to right in question readily available can assist in human rights promotion. This project aims to assist, and not to substitute for, effective and professional human rights advocacy.

The second objection is that a database such as that under discussion tends to highlight shortcomings by 'good states' - states that are careful to provide legal powers for their executive/enforcement agencies, but that it correspondingly overlooks violative behaviour by 'bad states', where enforcement agencies may be permitted to act in an extra-legal fashion. The classic example is a military dictatorship presiding over a state with a resounding bill of rights in the constitution, but with security force death squads roaming the countryside. While this criticism raises important issues, it does not follow that because a project such as this is unlikely to make a major contribution to tackling human rights violations in bad states, its potential contribution to human rights promotion in good states is thereby negated. The overall struggle for human rights will require a multi-layered integrated strategy which will need to be constantly reappraised. Differing situations call for a diversity of tactics. Initiatives such as that under discussion can play a part, but only a part, in human rights promotion. It is important that limitations as well as potential gains are recognized.

2. Criteria For The Development Of Country-Specific Law-Based Databases

While bearing these limitation in mind, it is nevertheless the case that the continuing phenomenal growth of the WWW entails a corresponding increase in the potential utility of having country-specific human rights legal material available on-line. Potentially, the issue could be addressed in quite a number of way. In attempting to find the best solution we identified a number of criteria by which the various possibilities could be assessed. These criteria broke down into three categories: data specific-criteria, IT-specific criteria, and overarching criteria which should be applied both to data and to IT questions. The three overarching criteria were (1) compatibility with the best available standards, (2) minimization of resource requirements, and (3) ease of use. As regards specific data-related matters, the key criterion was comprehensiveness; and as regards IT-specific issues, the criteria we identified were (1) flexibility, (2) portability, and (3) security.

At the outset, a strategic choice must be made between two alternatives: one is to attempt to construct a single database with a world-wide remit, which would make available material from all parts of the globe; the other is to develop a template by which material could be made separately available from many sites world-wide ('the template model'). The first strategy can quickly be dismissed as unfeasible. The effort required for one centre to collect, transmit, arrange, up-date and make available such a broad range of material would be so resource-intensive as to make render it unviable as a long-term strategy. Such an approach not only fails to meet the criteria of minimization of resource-requirements, it also runs contrary to the decentralized ethos of the WWW.

By contrast, the template model appears to require a very much lower concentration of resources. Because the data collection and the data dissemination sites should be largely coterminous, collection and communication costs can be reduced to a minimum. This model requires that the centre perform only one main function, that of defining standard formats for presenting data, and one subsidiary function, that of accrediting sites which utilize these formats. The latter is not strictly necessary, but is desirable in order to ensure reliability of data. Neither of these functions need be particularly resource-intensive

3. Structuring Data: The What? Question

The template model therefore requires further investigation. A key requirement, as set out above is comprehensiveness. The full text of six kinds of primary sources of human rights law would need to be included: constitutional provisions, statutory provisions, provisions of delegated legislation, notices, caselaw, and material related to international human rights treaties to which the state was a party. The latter category includes documentation related to signature, ratification, reservations and derogations.

Secondary material would be identified according to the same test, with the following materials eligible for inclusion: books, articles, monographs, academic studies (theses), official reports, and reports from non-governmental organizations and from academic centres. For copyright reasons, in most instances, references rather than full text would be given. Secondary materials would remain law- rather than events-based, but since many such sources could be expected to include both kinds of information, inevitably a certain amount of events-based material would find its way onto the database. The cardinal principle, that the database compilers do not themselves make judgments on alleged violations, would however, still be respected, and it would need to be made clear that the project itself would remain agnostic on judgments made in secondary material. This is not to deny that difficult judgments would be required; a rule of thumb might be whether the secondary material in question would have been stored in hard copy in a conventional academic human rights centre.

A key issue that will need to be addressed is that of language. As at minimum, material would need to be made available in the main official language of the country in question. Where there is more than one official language, it would be desirable to include available materials in each of them. For the purposes of international monitoring, it would also be desirable to include texts in English, French and Spanish. Where official translations, or good unofficial translations, into one or more of these languages are available, they can be incorporated, but commissioning extensive translations would be so expensive as to be unfeasible.

The question of how data (primary and secondary), should be arranged and accessed, involves both bibliographic and IT issues. As stipulated above, the key criteria we employed in assessing options were compatibility with best available standards, ease of use, and minimization of resource requirements. It was our view that the IT solution (discussed below) should largely follow from end-user orientated, rights-based bibliographic imperatives. While classification of materials tends to be downgraded on web-based projects owing to the ease of creation of search facilities, we felt that it should be possible to create the best of both worlds by making data accessible according to a standard bibliographic classification system, and through appropriate search facilities.

An initial question in arranging data is that of the taxonomy of human rights. It is now generally accepted that human rights can be fitted into three main groups: (1) civil and political rights ('first generation rights') (2) social, economic and cultural rights ('second generation rights'), and (3) rights to development, solidarity rights and environmental rights ('third generation rights'), but how for instance, do women's rights fit into this scheme? Would an end-user find it most useful to trawl through groups of rights arranged according to some classification system?, or should there be a list of key words which s/he could go to?, or should s/he be able to search the database for any word s/he liked in the hope of finding a hit? Would there be any advantage in allowing the user to search for particular types of document?

Examination of the literature revealed that while there existed no universally agreed standard for recording bibliographic information on human rights, the best available standards were those prepared by HURIDOCS, the human rights documentation network. Three HURIDOCS tools suggested themselves: the library shelf classification system as further developed by the Norwegian Institute of Human Rights in the University of Oslo, the HURIDOCS list of index terms, [1] and the HURIDOCS Standard Formats for the Recording and Exchange of Bibliographic Information concerning Human Rights. [2] While the latter two seemed primarily aimed at recording events-based data, they nevertheless provide useful reference points because (a) some of the standards were equally applicable to events-based or to law-based records and (b) while not ideal, they seem to provide the nearest thing to a generally accepted standard in this area.

In view of the importance of the HURIDOCS initiatives, and having due regard to other efforts in this area, [3] we felt that initially at least, the end-user should be offered the opportunity to search in one of three ways, but that these options should be re-examined in the light of user-feedback. The three methods were (1) according to the HURIDOCS-based shelf classification system, (2) using HURIDOCS key words (3) using words selected by the end-user.

4. IT Imperatives

In order to meet these requirements, the following functionality was identified as necessary for the database:

1. Menu-based access to the documents catalogued, allowing different views into the same data.
2. A search facility, as simple as possible without needlessly sacrificing sophistication.
3. Query and access analysis, to allow the database maintainers to assess the relative popularity and utility of the documents catalogued, and of the mode of access.
4. A reporting and listing facility, so as to prepare a comprehensive overview of the data recorded.
5. Provision for user feedback, with the aim of improving the database over time.

The choice of software was dictated by the need to meet the criteria of ease of use, minimization of resource requirements, compatibility with the best available standards, flexibility, portability, and security. Ease of use in this context entailed three elements: ease of inputting data, ease of accessing data, and ease of linking with other databases. A useful rule of thumb for ease of use is whether the task in question could be carried out by Law student volunteers, since the need to minimize resource requirements means that professional assistance would generally be unavailable.

The need for compatibility and portability was dictated both by the resource issue and by the strategic decision that the underlying database software would be made freely available to other sites interested in participating, and must therefore be simple to install and not depend on the availability of particular hardware and software (particularly commercial software). It would need to be possible therefore to translate the software interface elements to another language easily. Finally, security considerations arose from the need to ensure that the information in the database could not be modified without authorisation.

5. The CHRIS Prototype

Construction of the prototype database (designated CHRIS - Country-specific, Human Rights Information System) in the Law Faculty, National University of Ireland, Galway, entailed an assessment of the compatibility of the following software options with these criteria:

(1) A Relational Database Management System

It is possible to link a conventional relational database management system (RDBMS), such as Microsoft Access, to a World Wide Web server, such as Microsoft's Internet Information Server and build an easy-to-maintain database from such software. It is uncertain to what extent it would be possible to connect such a system into a larger, distributed database. Such a system should be relatively secure. Implementation, however, would be difficult. Reasonably priced commercial database and server software are generally only available for Windows 95 and/or Windows NT. Expertise in these areas are not available to the project, and tying use of the CHRIS system to a particular operating system or commercial RDBMS is not desirable.

(2) A Text-Oriented Database Management System

This option is very similar to the previous one, except that in this case, the database management software would be Lotus Notes (or similar), Notes being somewhat more suitable for managing unstructured information (which is what the database will contain). Lotus have also released software named Domino which allows access to a Lotus Notes database via the World Wide Web. The same evaluation applies: while easy to maintain and secure, the requirement for a dedicated NetWare/Windows NT-based Lotus Notes server renders this option unfeasible and undesirable.

(3) A home-grown, CGI-based system

In this case, the database management software and user interface would need to be written from the ground up by the project team, most likely in a combination of Perl and C. The database would be maintained via the World Wide Web itself and can be hosted on any system with Perl, a C compiler and a World Wide Web server installed (such software is available as Open Source. Search facilities can be provided by any of the freely-available text-indexing packages available for UNIX, such as Glimpse, SWISH or freeWAIS.

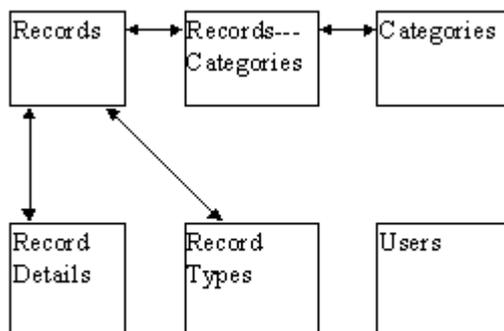
It is possible to make maintaining the information relatively simple; maintaining the underlying system may be more difficult, as this will require an understanding of the details of WWW technologies such as HTML, HTTP and CGI and programming expertise. The simplicity and flexibility of a UNIX-based solution may make small modifications easier; this must be ensured by clear, thorough documentation. It should be possible to link such a database into a larger collection of documents without difficulty. Security can be provided by the use of password-protected access to the maintenance pages. Implementation will not be trivial, but is at least feasible within the constraints under which the project operates. Such a system would also be more resource-efficient than the previous two options.

As both the options of using a RDBMS and of using a text-oriented DBMS are unfeasible and undesirable, it was decided to construct a database system from scratch, using freely-available UNIX software and CGI programming. Construction was guided by the three great virtues of a programmer, laziness, impatience and hubris. [4] To make long-term maintenance of the system simpler, an set of four scripts was written for the back-end data entry and modification pages. These dynamically produce HTML forms for browsing and editing the data in the database, based on a database definition in a text file. This arrangement means that a change to the database schema need only be entered into the definition file, and all related pages will automatically change. This greatly decreases the amount of programming required to build the system once these scripts are perfected.

The front-end pages, seen by the end user, are a set of static HTML pages. These are written by a script which grinds through the database and prepares a menu page for each category and a page for each record. This script can be run on a regular, scheduled basis, to update the pages (for example, each night as part of the server's regular maintenance procedures). This approach was taken because to query the database for each page access would place an excessive load on the server and the data is not sufficiently dynamic to justify this. This means that end users have quick access to the information in the database.

The use of generic scripts, with the database definition stored separately, means that the CHRIS project has produced a re-usable framework for a simple WWW-based document database. It should be possible to separate this structure from the context of legal documents and donate it to the pool of Open Source software.

The structure of the database is relatively simple. There is one primary item of data, a bibliographic record (which can be sub-divided into several types: treaties, constitutional provisions, legislation, cases, books, journal articles, WWW pages and other). These records all fit into one or more categories (at present, keyword classification and structured classification). Information on database users is also recorded, and there are tables to link all the above together. The simplified diagram below shows this structure:



6. Conclusions

What is presented here is work-in-progress, and makes no claim to provide definitive answers. The next stage will involve assessment of user-feedback on the CHRIS prototype, and collaborative engagement with others working in this area in a process which should make at least the outlines to the answers clear.

Notes

(1). <http://phonton-63.iprolink.ch/~huridocs/hdsbindx.htm>, 13 March 1998.

(2). <http://phonton-63.iprolink.ch/~huridocs/bibliosf.htm>, 13 March 1998.

(3). We also found J.A. Andrews, Keyguide to Information Sources on the International Protection of Human Rights (London 1987) and J.R. Friedman and M.I. Sherman, Human Rights: An International and Comparative Law Bibliography (Westport 1984) useful.

(4). L. Wall and R.L. Schwartz, Programming Perl (Sebastopol 1991), xiv.