Proposed UIA Web-oriented Development Pathway

This note explores a possible compromise way forward that provides some focus to the earlier note on web strategy in the light of recent insights into constraints on evolution of the UIA information facilities. It follows from the note on *UIA Web Strategy* (14 April 2003) and *UIA Computer-related challenges* (6 May 2003).

Summary

The key components of the strategy, building on the new server hardware and software, are therefore:

- Introduction of a parallel non-Microsoft database system based on open-source Linux to avoid progressive licensing lock-in
- Use of this open-source system for regular in-house editing, as well as remote editing
- Periodic refresh of Microsoft-based (Revelation) database from the Linux system whenever there is a need to use the UIA's suite of programs for research, production of books, CD, etc
- Key factors in the switch over would be the design of the editorial interface (and the necessary personalization) -- postponing non-essential adaptation of programs (notably in the case of the in-house web service)

Emerging constraints

1. **Database software:** Apparent need to progressively reduce dependence on UIA’s DOS-based Revelation database software (dating from 1986) because of the major changes in the operating system context. This need is reinforced the constraints of software licensing Microsoft business formula (and the Revelation analogue), as widely challenged in the financial press. The case applies even if the announced Revelation/Linux formula becomes possible (for OI but not for AREV or SWEB?). To some degree, the UIA’s actions should seek to reflect the challenge for many non-profits, faced with this licensing burden, in limiting their software expenses.

2. **Competing information suppliers:** Emergence of a variety of competing information suppliers and tools (NGO portals, IGO databases on NGOs, registries, etc), whether seeking to compete with the UIA, effectively undermining UIA initiatives, or seeking creative patterns of data exchange with the UIA

3. **New information tools:** Plethora of organization-focused information products and tools (including dedicated search engines and intelligent agents) that in one way or another are progressively eroding the value of the UIA information products. This increases the challenge of “visibility” of any particular service.
4. **Re-positioning of UIA information services**: Consequent need for the UIA to identify new products and services in which in areas where its skill-set (and self-financing capacity) offers a competitive advantage – whilst maintaining its relationship to SAUR to the extent feasible (and recognizing that alternatives may be either less advantageous or more subject to short-term political and commercial decision-making, characteristic of public and foundation funding)

5. **Delocalization of UIA work**: Need to respond to opportunities of remote working to make best use of potential patterns of collaboration, including collaborators in other continents

6. **Significance of UIA information work**: Some elements of UIA statutory concerns are now being addressed through the information and communication tools now widely available in the e-environment, notably organizational development, management (from the grassroots up) – previously known as facilitation and organizational cooperation. There is however increasing concern that the vast quantities of information that are increasingly available are not making a significant difference to resolution of the problems with which the UIA's statutory obligations are associated.

**Opportunities**

**Competition**: With respect to potentially competing initiatives, the UIA needs to shift to a posture that is less dependent on conventional boundary protection by shifting its focus from data profiles to how the data can be uniquely repackaged and accessed, as well as meta-data (visuals, commentaries, articles, presentations, consultations, and statistics). Whilst continuing to produce existing information products for as long as feasible, the emphasis should be on implementation of facilities in areas where the UIA contribution is more consistent with its long-term goal than with service needs that others are increasingly fulfilling.

The concern should therefore be with identifying more unusual patterns of collaboration (search strings, exchange of tagged data, etc)

**Information marketing**: On the basis of a decision in 1982, the marketing of the principal UIA data products has since been outsourced to SAUR – which has become one of the world’s prime suppliers of international reference products (and has since been taken over by Thompson-Gale as the largest producers of such products). Arguments to the effect that the UIA does not engage in any effective marketing of its information products therefore raise the question of the nature of assumptions about how it might allocate resources more effectively than those marketing machines – especially in the light of the experience of the dot.com approaches to marketing. More appropriately reframed, the issue has always been how the UIA might market more effectively to other potential users, especially when their own resource challenges may undermine UIA abilities to sustain its production of those products. There is a recognition that there could be a better uptake in the current populations of purchasers of UIA’s existing products (YBIO and Associate Members). The challenge is how to reach these potential buyers, as well as potential new users, and to determine what they need to know in order to make the decision to spend the money.
**New services:** In addition to its basic focus on organization profiles from which other products continue to be derived, the UIA needs to build on the following:

- Its unique focus on relationships between organizations
- The unique range of complementary and interlinked databases that it maintains
- The degree of interlinkage between profiles in other databases
- Initiatives already undertaken with regard to web-delivered visualization of data in particular (mapping, posters, etc) and the possibilities of sonification.
- Ability to offer to users an unusual degree of interactivity with these databases
- Development of UIA search engine facilities
- Licensing possibilities for access to XML-tagged data updated by UIA
- Appropriate advertising on the UIA websites

**Concrete next steps**

The following concrete steps would help to enable the new services envisaged above.

**Linux:** With respect to reducing dependence on Revelation, the opportunity would seem to involve the following hybrid solution:

- Commitment to development of Linux workstations for the majority of regular internal editing jobs
- Use of a core group of workstations that would continue to make use of Revelation/Windows
- Periodic (daily, weekly, monthly?) refresh of the AREV environment from the Linux environment (MySQL?) in order to run legacy programs, and notably production jobs
- Remote editing via a non-AREV interface

Some of the following steps (tentatively prioritised) have already been tentatively explored (as cost-saving projects in the medium-term) but now require a strong commitment of resources:

**Higher priority (2003):**

- *Completion of improvements on static website:* This is vital to marketing and UIA visibility. Improvements are required to items such as: online ordering and payments facilities, provision of a secure connection, automatic translation.
• “Launch” of UIA websites: The UIA has never "launched" its own website (whether static or dynamic) or any element under it (e.g. Encyclopedia). This has been due to its rapid development, and the continuing challenges of harmonization, design and debugging. The websites need to be rapidly brought to a condition in which such a launch is feasible using the many techniques of which relevant staff are fully aware.

• Development of remote editing facilities: The VPN infrastructure is basically in place. The editing interface could then be identical with that in-house. It could be used to enhance productivity by staff (based in London, Leuven, etc) and external collaborators (in other countries), provided management and editorial control facilities can be enhanced. This tool could be replaced by any new tool based on an open-source in-house database (see below). If necessary it could later evolve into a thin client rather than VPN-based facility, for example, using HTTPS and Web Services.

Medium priority (2003-2004):

• Development of other products: The proven ability to generate (and adapt) with relative ease multimedia information products (maps, etc) should be extended as a prime source of income in a sector in which the UIA does indeed have a significant competitive advantage. Possibilities of other products include licensing of access to data, modular adjunct subscriptions, access to historical publications, etc

• Development of online web interface features: This calls for continuing experiment to enable users to have better insights into the patterns of data maintained by the UIA. This should be framed as quality marketing to develop recognition of the uniqueness of UIA information services. It should be linked to the new income-generating products (above). The UIA will need to be able to provide online/offline services that are as performing and flexible as possible. Many open source technologies are available right now. Mature business (and free) technologies like Java should be considered as they provide enormous flexibility, security and performance.

• Use of Linux for editorial workstations: In general there is a need to upgrade the hardware of the majority of the UIA workstation family (increasingly outdated) – especially since it is currently unclear how well Linux would function on the present lower capacity models. In the case of new machine purchases (e.g. via Dell), licensed operating systems do not add to the cost of the machine (nor can the cost be reduced by removing the operating system). A new interface requires development (or adaptation) of a suitable editing interface (possibly based on Java, Perl or PHP), preferably using open source features. A great deal of care is required in changing an interface (re-training, acclimatization) on which many depend (notably given the current personalization facilities). A move to an open source database platform does not necessarily imply a shift to Linux on the desktop – if a web browser were to be the primary editorial interface (as already explored in a prototype).

• Development of AREV <> XML conversion facilities: Conversion from AREV has already been done experimentally, but not the reverse. Tagging
may not need to conform to XML specs if the requirement is only for in-house reconciliation between parallel databases. This conversion does not need to be in real-time but can be done periodically (daily, weekly) according to need to use legacy applications

- **Switch to in-house parallel use of open-source database**: Aspects of this have already been explored (but depend for implementation on completion of some previous points). Possibilities include MySQL (foreign characters?), Postgres/Postgresql. Future data integrity issues need to be considered, including possibilities of roll-back. Keeping data integrity on the application level is something that may not be sufficiently secure for an organization (like the UIA) where data is at the heart of the operations.

- **Development of online feedback on profiles**: This facility, distinct from editing, needs to be developed to allow organizations to update online their own profiles in such a way that editors can easily adapt the amendments to the UIA house style – but without delaying the users recognition that amendments are already visible. This should also be understood as a means of improving relations with suppliers of information on which UIA is dependent.

**Lower priority (2004+):**

- **Investigation of open-source web deployment**: Aspects of this have already been explored. Clarification is required using secondary databases on whether a seamless integration can be provided with existing programs and some indication of the amount of work involved. One concern is that any higher priority investment in development may call for earlier switch to open source deployment on an open-source platform. Whilst potentially desirable it is not immediately clear that the conversion of programs would result in cost savings.

- **Switch to use of open-source web deployment**: In the light of the above tests, the priority is lower because of the investment already made in 2003 in this facility (licensing through 2004, etc).

**Elements for a UIA Strategy Statement**

This provides an outline for elements of a UIA strategy statement in the light of earlier notes and notably those relating specifically to the evolution of the UIA information facilities: *UIA Web Strategy* (14 April 2003) and *UIA Computer-related challenges* (6 May 2003).

1. Build on core information strategies identified in the UIA statutes that have proven to be basic to its economic viability – for which personnel with appropriate skills have been acquired and trained over long periods to provide the necessary long-term continuity for the maintenance and development of these strategies

2. Minimize involvement in initiatives that do not reinforce core statutory activities, especially where such modes of action have demonstrated a rate of
long-term development incompatible with the economic viability and skills essential to the core activities – and particularly where other bodies have demonstrated a willingness and competence to pursue such matters with the resources at their disposal.

3. Seek out and respond to new opportunities that reinforce, complement or enhance the significance of the core statutory activities – provided that economic viability is ensured (at an acceptable level of risk), whether directly or through the improvement of the quality of the network of its contacts and the reputation of its information services.

4. Remain attentive to the turbulent nature of the evolution of the information society, the technology on which it depends, and the vulnerability of long-term information initiatives -- anticipating the necessary adaptation to its core statutory activities to ensure their continuing viability.

5. Remain attentive to the range of other emergent information initiatives and coalitions that may destabilize the core statutory activities, whether through direct competition or inadvertent side-effects – developing partnerships where these are deemed necessary and appropriate.

6. Develop and maintain appropriate relations with bodies with complementary objectives to the degree that this is consistent with core statutory activities – rather than as a resource-consuming exercise in token response to short-term opportunities.

7. Develop working methods, supported by appropriate technology, that facilitate the decentralization of core activities to benefit from, and enhance, a widespread network of collaborators whose expertise and commitment are vital to the viability of the core statutory activities.