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Introduction
Readers are unlikely to be surprised if this paper is slanted towards those organisations planning to join SILAS. The Singapore Integrated Library Automation Service will shortly be mounting an on-line database of some 3 million Machine Readable Catalog (MARC) records as a bibliographic source and eventually a Union Catalogue for the libraries of Singapore. More than twenty government funded libraries are confirmed as participants in this network and the list of potential participants is growing. Commercial libraries and information services have registered a strong interest in becoming customers of the service. This congress includes representatives of many of these organisations. Our Malaysian colleagues will face similar problems and opportunities, as mentioned in Shahar Banun Jafar's paper, and many representatives from further afield have some sort of bibliographic network already at their disposal. Much in this paper may also have relevance to libraries whose interest in electronic information systems does not currently extend to cooperative networking. Some Singapore organisations may be planning in-house systems but be wondering about future 'compatibility'. This paper is also for them.

This paper is about planning. Planning is a bit like hygiene; more evident by its absence than its presence. It cannot guarantee success, but its absence is a strong indicator of possible failure. My notice board has a sign: 'If you fail to plan, you might as well plan to fail.'

The topic of planning is a big one – too big for any twenty-minute paper – and it would be presumptuous to attempt a comprehensive review of it before an audience of experienced library professionals. Instead the paper lists a number of suggestions and guidelines, drawn from practical experience, for those planning to join a library network. These notes are organised under such headings as Scheduling, plus Information, Manpower, Environmental, Financial and Strategic Planning.

Scheduling
Within SILAS, a User Support staff is allocated to a library, and
detailed implementation scheduling for that library begins a full five
months before that library's 'live' date. In practice, it may be wise for
the library's own scheduling to begin some time before that.

Manpower recruitment and training, obtaining funds, procuring
equipment and converting accommodation all take considerable
amounts of time, and the librarian planning to join an information
network would be advised to start the scheduling process as soon as
possible.

Based perhaps on the contents of this paper, make a list of all the
things that must be completed between now and 'live' date; how long
they should take, and who is responsible for getting them done. If you
are comfortable with the technique, a PERT chart could now be made,
to get a grasp of the dependencies and interrelationships involved. No
attempt should be made to include date information on that chart
however; things are likely to change too quickly for that, and a simple
bar chart should be drawn up instead.

It is vital that the first draft of this schedule is produced early; a
library that waits until it has been allocated a 'slot' on the
implementation list is probably unlikely to complete its own checklist of
activities in time for a smooth implementation.

Information planning
'Just as you cannot be both married and single, you cannot join a
cooperative and expect everything to go on just as before' (Lovecy,

Most libraries joining SILAS should find that 80 per cent or more of
the cataloguing they require already exists on the database, so that
'cataloguing' it merely requires the addition of their classmark.

This benefit must be balanced by the fact that the remaining up to 20
per cent may have to be catalogued more fully than had previously been
the case. To make each contributed record useful to other libraries,
certain agreed standards must be laid down. In practice, a survey of the
professionally staffed libraries of Singapore has shown that the majority
already produce catalogue records no less full than the minimum
standard (the so-called 'Interim' record) required of SILAS libraries.
Libraries can catalogue to any level above the minimum, of course, and
one important element of preparation for SILAS is to decide the
amount of information to be included in their original cataloguing.

If the SILAS records are then to be downloaded to a local system, a
further level of decision-making has to be applied - how much of the
full MARC record available from SILAS should be retained on the
local system? There is a trade-off to be done between compactness of
storage and processing simplicity on the one hand, and completeness of
information and upwards compatibility on the other.
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A further implication of joining SILAS is acceptance, and cooperation in the maintenance of a national authority file. The Western Library Network (WLN) on-line authority control system used by SILAS, with its effortless ability to change retrospectively every catalogue entry affected by a change of heading, has been praised by cataloguers the world over. Nevertheless its use does involve a loss of control in the individual library, and changes in the workflow that need to be planned for.

In particular, a library should study the Library of Congress Subject Headings and consider whether this scheme will provide adequate subject access for its users. Then SILAS team might be able to arrange for additional library-specific subject headings to be accommodated, but considerable forward planning would be required if this were to be done.

Decisions would also be needed on the forms of products (catalogues, and so on) required from SILAS. If a library has its own local computer system it might seem able to output its own products, but careful timing exercises often show that the regular production of COM catalogues is not a viable proposition on a micro or minicomputer. Whatever system produces them, there is a temptation to base them on the catalogue sequences already existing in the library, but the opportunity should be taken to match the new products to the users’ current needs. One survey for this purpose (Holgate, 1986) found that only 16 per cent of catalogue users knew there was a classified sequence and not all of these know how to use it.

Planning to join SILAS will usually mean closing the manual catalogue. Although SILAS can produce catalogue cards for libraries that wish, the likelihood of differences in layout and choice of heading, and the ease of production of complete COM catalogues, will make interfiling an unpopular choice. It should be borne in mind however that many users may not look beyond the first catalogue consulted, so that closing a catalogue severely restricts access to the books described in it. The alternative is retrospective conversion. SILAS provides a unique source of retrospective cataloguing for libraries in this part of the world. There are several ways in which the conversion could be achieved, depending on available manpower and funding, and SILAS will be glad to advise on the best course of action; but once again, an early approach is advisable.

A special case of retrospective conversion is the loading into SILAS of a library’s pre-existing machine-readable files. It is a condition of becoming a participant that a library should contribute its current machine-readable catalogue to the National Database. This is achieved by converting it into USMARC format for loading into SILAS. Special matching algorithms ensure that if a record is already on SILAS, the
library’s holdings get attached to it, and if not, the whole record is added. The approach of passing all the data to SILAS, and letting the machine sort out the matching, is one way of conserving a very scarce resource: that of manpower.

Manpower Planning

“The finest plans have always been spoiled by the littleness of them that should carry them out. Even emperors can’t do it all by themselves” (Brecht, 1966).

Without wishing in any way to pre-empt Nick Moore’s paper, it is essential to emphasise the importance of Manpower Planning in ensuring a smooth induction into an Information Network.

A good start would be to attempt some kind of ‘skills audit’. Tabulate the skills and strengths of your staff, against those likely to be needed by a network participant. Keyboarding skills are sometimes given less weight than they deserve; a competent keyboarder tends to take to a new computer system more easily, simply because speed and accuracy of input are less of an obstacle. Familiarity with AACR2 and LC Subject Cataloguing is important. Computer literacy is essential; and it is not necessary to point out to this audience that this is not synonymous with an ability to program MARC tagging, and the command language, procedures and standards of the network are all areas of expertise that need to be acquired; the SILAS training scheme, for example, takes some three weeks of tuition to cover the ground.

Training margins are one element to consider in complementing the new facility. Although only the initial few staff need be trained by the network itself, and further training may be ‘on the job’, workers’ productive time will be diminished by time taken being trained, and training others. The increase in cataloguing productivity that is an expected and tangible benefit of joining a network will be mitigated to some extent by a number of factors surrounding the initial implementation.

The library may opt for some measure of parallel running, retaining its previous cataloguing procedures for a period until all are convinced that the new system is satisfactory. This may be considered excessive caution with software as well tested as WLN, and is certainly very costly in manpower terms.

There may well be a cataloguing backlog which can now thankfully be caught up. Until fully up to date, however, the extra work involved in this exercise may disguise the productivity gain. Similarly the increased ease of cataloguing may encourage staff to catalogue materials or provide access points that would not have been possible before.

Retrospective conversion has been mentioned above. Some libraries
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will have retrospective catalogues many times their current intake, and the staffing implications of a decision to convert must be confronted and provided for.

A final element for consideration is an increase in staff turnover. A glance at the vacancies columns of the western professional press will confirm that network experience makes a librarian more ‘marketable’. If the implementation has involved considerable in-house development work, the officer chiefly concerned may well move on to more specialised work in the field (as Lynn Allen shows us, ch. 12). This turnover is healthy, but it will cause problems if not planned for. Less healthy, but apparently inevitable, is high operator turnover. If a library installs a local system of any sophistication, one or more operations staff may be required. The level such staff would be recruited as would be Library Technician. Typically they would require a week to ten days of full-time manufacturer’s training plus several months of hands-on experience to reach a full level of competence in their job. At that stage, there is a strong possibility of their leaving for a more lucrative job in industry. If a manned local computer is in your plans, a 50 per cent margin for operator recruitment and training would probably not be too high.

Environmental planning
The sort of system that requires the operators discussed above, will need a level of environmental planning that is beyond the scope of this paper. Nevertheless even the installation of a single, simple workstation merits considerable planning.

Data cabling
The world of local data cabling is becoming a very interesting one, inhabited by Local Area Networks, voice/data PBXs, fibre optics and the like. The technology of the SILAS workstation is rather more conventional, based on terminal clusters. This means that one in every four terminals at a location contains an extra microprocessor that controls a data line, sharing it with up to three other terminals that are plugged into it. This controller terminal is therefore best sited approximately equidistant from the other three. Ideally terminals in a cluster should be no more than 50 ft apart, but in practice distances considerably in excess of this can be achieved, particularly if screened cable is used. If problems are encountered line-drivers can be added to reduce attenuation on longer cable runs. Shielded cable works very happily pinned to the wall; conduit or ducting is unnecessary except for aesthetic or physical safety reasons. Untidy, unprotected loops of cable, especially across the floor, are to be avoided.
Power
Although workstations are invariably 13 amp, providing for their power supply also needs careful planning. Sockets will be required for the modem, the processor, the monitor and the printer. The supply itself should be as ‘clean’ as possible (not subject to ‘spikes’ caused by heavy electrical machinery, for example lifts). It new outlets are to be installed it is better to over- rather than under-provide, to allow as much flexibility in the final terminal siting as possible.

Airconditioning
Although all terminals are guaranteed to work in a ‘normal office environment’, the atmospheric conditions in Singapore as regards both temperature and humidity can fall outside the recommended range even before adding the few hundred watts of heat output from the device itself. It is therefore vital to ensure that the office airconditioning is able to cope.

Lighting
Not enough planning is usually given to the lighting arrangements for terminal workstations. Monitor screens are best viewed at quite low light levels. On the other hand the reading materials essential for cataloguing demand a higher level. A compromise level might be 300-400 lux, supplemented if necessary by a reading lamp. Bright surfaces, or worse, windows, behind the monitor screen should be avoided as the contrast with the dark screen will tend to dazzle. Patterns of light behind the operator, such as venetian blinds at windows and overhead series of fluorescent lights, will cause distracting patches of glare on the screen. So called ‘anti-glare’ screens seem to make matters worse if anything; the best arrangement seems to be to position the user’s line of sight in parallel to the main sources of light.

Posture
Users of information networks inevitably spend lengthy periods seated at workstations. It is important to devote some time and effort catering for the comfort and health of those individuals, when it comes to the workstation furniture. There is a range of attractive ‘personal computer desks’ around, but much more important is the choice of chair. Chairs should have an adjustable seat height, and a back rest which can be tilted as well as adjusted up or down. Headaches and low back pain are the most frequent complaints of habitual video display users; and both are related to posture.

Financial planning
Financial planning and review systems vary from organisation to
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organisation and are rigidly adhered to within that organisation, so that this paper can make little contribution except to point out that much of what has been said so far in this paper will have an effect on budgetary planning.

Within SILAS it is recognised that financial aspects will influence possible system use and that advance notice is required of any tariff changes that might affect the costs to the user. The SILAS charging system for participants, implying usage at minimum cost for government-funded libraries, will not change before FY 89. The tariff for non-government libraries will be fixed in plenty of time for planning to take place for FY 88, the first year they become customers.

Strategic Planning
Financial planning has to assume a future which can be predicted with some certainty, in an environment that will resemble the past. Strategic planning on the other hand is adaptive rather than inertial; concerned with coping with change rather than trying to maintain the status quo. The bulk of this paper has been concerned with efficient and technically correct implementation of the basic choice of joining an information network. In the longer term: 'the pertinent question is not how to do things right, but how to find the right things to do' (Drucker, 1964).

The theme of this congress is change, and many papers point to new developments just emerging. The library implementing information technology needs to be aware of what it is trying to achieve with the changes it is planning. It needs contingency plans for any threats to those objectives it may encounter. It also should devise ways of evaluating and capitalising on the opportunities that may come its way to achieve its objectives without necessarily adhering to its original plans.

Conclusion
This paper may reveal, to some, a subtheme of change and uncertainty. Talking to colleagues implementing new information technology around the world often seems to involve a discrete avoidance of the present tense. Discussion hovers between the future and the pluperfect subjunctive; between what is to come and what might have been. Plans in this field are so dependent on factors outside their author's control, that they may be obsolete before the ink on them is dry.

Why, then, draw up plans at all? I hope it has become apparent during this paper that it is not the plans that are important, but the process of planning itself. Planning to participate in an Information Network demands an awareness of many interrelating factors for which provision must be made. Problems must be confronted and resources
found to resolve them. Successful planning is evidenced not by a tidy and unamended plan, but by an aware and controlled implementation. To quote Dwight D. Eisenhower: 'Plans are nothing; planning is everything.'

References