Papua New Guinea (PNG) became an independent nation in 1975. It was formed from the Australian colonial territory of Papua and the United Nations trust territory of New Guinea that had been administered by Australia. Although known to navigators from the 18th century onwards a combination of poor winds and a coast line surrounded by coral reefs kept Europeans away, until the coming of the steamship at the close of the nineteenth century. The rugged nature of the PNG mainland prevented inland exploration until the late 1930s. PNG is thus one of the last countries in the world to have extensive western contact. Even today there are few roads and many inhabitants are more familiar with aircraft than vehicles.

For UK readers it might be helpful to describe PNG as being an island nation, about the size of the UK, with a population of about 4.5 million. 90% of the population are rural and do not participate in the formal economy. The country is however very rich in natural resources: copper; gold; oil; natural gas, and timber. and the country is a coffee exporter. It is self-sufficient in sugar and beef. The nature of the terrain has kept people in separate clans for 40,000 years of human settlement so that today over 750 distinct languages are spoken. Three official languages are recognized, English, Tok Pisin and Motu. Education is in English.

The level of economic activity and continuing Australian assistance, by way of direct budgetary aid, has allowed PNG to maintain two major higher educational institutions, the University of PNG at Port Moresby and the PNG University of Technology at Lae, at a relatively high standard. For example, the University of Technology at Lae with 1,700 students was funded for K24.6 million (16,974,000 sterling) in 1994. The institutions were left considerable assets in buildings and plant by the departing colonial power together with an Australian-style higher education administration structure, thus making the higher education institutions in PNG some of the most fortunate in the third world. This was to remain true until mid 1994, when a currency crisis led to a 30% fall in the value of the kina. Coupled with a cash flow crisis, devaluation led to a general government inability to pay its bills. At the time of writing this situation continues.
The University of Technology founded in 1964, has always spent heavily on its library with library spending running at a constant 6% of institutional budget. A succession of expatriate librarians saw themselves as building for a long term future. In the early 1970s and early 1980s, they had fair reason to expect that eventually they would be able to provide service to researchers, teachers and scholars at a world standard. By the end of the 80s they were claiming a library of 124,000 monographs and 2,000 periodical titles, of which only about 25% were donations. At Lae they were, however, facing similar problems to libraries in the old English polytechnics in that there was a very wide variety of courses and a great diversity of course levels. This made economies of scale impossible to achieve. Serious study of the collection's capacity to serve the university at developed country norms may well even then have shown a continually widening gap between capacity, expanding though it was, and requirement. The library at Lae, despite its fortunate circumstances, was typical of its third world peers, in that even with constant and sustained growth the gap between what it could provide and what was required to match first world provision was still widening.

The above was the situation in the 1990s when the escalation in serial prices occurred. This world wide phenomenon was exacerbated in PNG by falling budgets (resulting from PNG's Northern Ireland type war in Bougainville); currency devaluation and a government cash flow problem. Thus by mid-1994 the University received only a fraction of its allocated budget and that in erratic monthly payments. The problems the library faced in operational terms concerning serials were: how to gain excellent management control so that we could instantly adjust to rapidly changing circumstances; how to manage contraction of the serials portfolio in a way that would not lead to hysterical academics, and how to cope with national aspirations to increase the university's research capabilities.

In 1992 the decision was taken to switch from a number of serials agents to a single one and to introduce consolidation. This was done through International Subscription Agencies Australia based in Brisbane. All non-PNG sourced serials including donations now go through their Brisbane office. Consolidation has led to some staff savings in Lae but they do not compensate for the service cost as PNG salary costs are about one third of those in Australia. The advantages of the service to us are in security of delivery, the provision of management information and speed of claiming. We probably gain a slight improvement in delivery time.

We are not alone in the third world in using consolidation services. Many African countries use European agents for similar reasons. Consolidation has provided the kind of management information and advice needed to make decisions about cancellations made inevitable by our financial circumstances and serials price increases. Of particular importance
has been professional assistance in accessing the impact of currency changes. This is a major problem in our unsophisticated financial environment where purchasing a travellers cheque is a big event. It should be noted that 99% of our acquisition budget is spent in foreign currency. In the eighteen months from June 1993 to December 1994 we cut our serials titles by 50% reducing from 2,000 periodical titles to 1,055. We did it in a determined effort to provide access to overseas sources instead of relying on institutional ownership.

PNG has a first-class telephone system, including digital exchanges and a packet switched network, PANGPAC. This made electronic access to information a realistic possibility. A decision was made to cancel subscriptions to journals, indexes and abstracts that were also available online. This provided substantial savings without detracting from the service. A portion of these funds saved were used to develop the database and document delivery service. University users who were forced to go electronic because of serials cancellations were not charged for the service.

A first step was to identify titles that could be obtained through online methods. The Dialog Name finder was compared to the library’s list of current serials. Matches were identified and paper journals earmarked for cancellation. Indexes and abstracts were prime targets for cancellation as online searching could provide more sophisticated retrieval for staff and students. Paper journals were reprieved when high levels of undergraduate usage could be demonstrated. This resulted in a cancellation of 100 titles for a total cost saving of K45,000 (24,000 Sterling).

The shift to electronic access had a drawback. Only one staff member, part of the Readers’ Services section, was proficient in online searching. More staff were needed if, as expected, the usage of the service increased. This was most likely as the paper alternatives would no longer be available. Staff were duly transferred from other library sections to Document Access. The new section was located in the same office as Serials to emphasize the links between the two and to facilitate cross-training. However, these changes led to increasing separation from the day-to-day routines of Readers’ Services. This coupled with the University Librarian’s desire for direct reporting from Document Access led to its amalgamation with Serials, with a budget allocation of K15,000 (8,000 Sterling) for electronic access and K198,000 (105,633 Sterling) for paper based journals.

Despite PNG’s poor media image, a trainer from Dialog’s Australian representatives, Insearch/Dialog, was persuaded to come and deliver a course. She got the opportunity to see some of the country, with visits to Bulolo Forestry College and Wau Ecological Institute. This allayed her fears and she really enjoyed her visit! All the staff in the Database and Document Delivery Section attended the course. They had a range of abilities and levels. The Papua New
Guineans included a clerical worker and several graduate librarians. The section head, an expatriate librarian, also attended. The training cost K5,000 (2,700 Sterling), but the number of staff able to perform online searches increased by 300%. Newly trained staff all had to demonstrate the service to the other library staff, as well as potential users. Promotion of the new service generated a demand, especially by final year students engaged in major projects. The staff had plenty of opportunity to practise their new skill, thus ensuring it was not learnt and forgotten.

Before 1994, the library used a number of document delivery suppliers including: the British Library, the Australian National Library and several PNG institutions. All were postal based services and delivery times were too long. With the shift to electronic access, the library had to improve document delivery time. It was no

This one supplier could process the majority of our requests.

Transmitting requests over telephone lines avoided the postage time of two weeks from PNG to England. ARTTel requests receive priority over postal requests, so there is less of a delay at the UK end. A number of value-added services were also crucial in the decision. REPLIES INTRAY allows the library to view information about our requests online and tracks the progress of individual requests, allowing us to deal promptly with rejected requests. The PNG University of Technology has had several colleges incorporated into the university, with more additions planned. Alternative Document Delivery Address meant the library could more effectively service those other sites. A home trip by the section head included a visit to Boston Spa, and he was able to provide on the job training on his return. After a year of operation delivery time has fallen from a minimum of two months to an average of 10 days.

The shift from hardcopy to electronic access allowed the Matheson Library to continue low cost popular journals in quantity for undergraduates and still provide for research. Electronic access has a part to play in libraries in developing countries that are attempting to come to terms with the rapid increase in serial costs and the need to provide service to an increasingly aware academic staff. It also provides for the needs of the student population who want access to a high volume of paper based material for their degrees.

The most important aspect of the arrival of electronic access for this third world library is that, for a limited number of scholars and researchers at least, we can now provide the same level of service as any other library in the world. The downside is that the library is no longer self-contained and must rely on external telecommunications links. Not a pleasant prospect in a country where first world reliability is a long way from achievement.