Chapter 8
Development of Academic Library Automation in Brazil

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ABSTRACT
The automation of university libraries in Brazil underwent a restraint of trade on computers and software, which took place in the country between 1980 and 1990, restricting the initial use of automation systems. However, they were often developed in creative ways: systems and applications were created and used in various universities, some as free software, others based on the ISIS platform from Unesco, in addition to using modern foreign systems, which only occurred in the 1990’s. This chapter provides a historical overview of the development of automation in the country’s university libraries, from the moment in which Brazilian researchers began to disseminate information technology, creating an automation culture in higher education institutions. Many people and institutions have also contributed to promoting and implementing automation in university libraries. This paper is on future perspectives of academic library automation in Brazil with discovery tools, next generation cloud-based systems and library automation equipment. Some possible future developments are also presented.

INTRODUCTION
What does library automation mean? I would like to introduce this chapter by assuming the position by Rowley (1994) and Barsotti (1990). Professor Roberto Barsotti (1990), an Italian naturalized Brazilian, former professor of Librarianship at the University of São Paulo (USP) and the Teresa D’Ávila Integrated Colleges (FATEA) in his book Computers in librarianship and documentation states:

When we speak of library automation, we mean the automation of the library’s technical processes. Basically, acquisition, cataloging and/or indexing and circulation. This automation is often confused with the creation and exploration of databases containing the library archives. They are different things, with different focuses and results, involving different software. (Barsotti, 1990, p. 65)

I believe that when computers were first being used in Brazilian libraries, there was a bit of confusion on the part of students, professors, librarians, researchers and systems analysts regard-
ing this distinction, which occasionally led to a lack of focus in the efforts to automate library services in Brazil, which were concentrated on creating cataloging, indexing and metadata search systems. This does not mean that these systems were not important. On the contrary, I am aware of all of the efforts that existed in the country when systems were adopted for generating bibliographic databases (such as ISIS by Unesco), creating record and exchange formats (such as CALCO - *Catalogação Legível em Computador*¹, based on MARCII), as well as broad spectrum indexing methods, such as LILACS (created by BIREME - Latin American and Caribbean Center of Information on Health Sciences). However, the main focus of this chapter is on automation systems for academic library services in Brazil.

In general, automation should be thought of as comprehensively as possible: using technology so that machines—equipment and computer programs—carry out human tasks: the same definition that appears in the Webster dictionary (Automation, 2012): “automatically controlled operation of an apparatus, process or system by mechanical or electronic devices that take the place of human labor”, which means using technology for basic services (cataloging, catalog search and retrieval, acquisition and circulation), user services (reference interviews, document requests), to retrieve information stored locally and in remote providers (using catalogs, metasearch, discovery tools and any other technology applied in libraries), for internal processes and user services, staff management, access control for physical spaces, security, financial transactions (service payments), interactions between the library and all of its stakeholders (employees, users, coordinators, private service providers, print and electronic information providers, the government,…), in other words, all of the services and processes carried out by the library, inside and outside of its building or room.

The automation of library services started to happen in Brazil only from the 1980’s on. According to Ohira (1992), “From 1980 on, automation began to move out of the embryonic and experimental level towards the operational,” (p. 234). The first studies and projects for automation, on a national scale, began with the National Institute for Space Research (INPE), between 1960 and 1980, and with the National Library, in 1973, when Manoel Adolpho Wanderley carried out a preliminary and general survey of the possibilities of partial or total automation of the services of the Brazilian National Library, in which the pros and cons of each case are shown (Wanderley, 1973).

On the other hand, in the scope of higher education institutions, it was in the beginning of the 1980’s that the first initiatives emerged, the large majority of them using software created by the education institutions themselves. Mr. Jaime Robredo carried out an important research in 1981, the result of which was presented at the Symposium on Library Service Automation (during the second National Seminar of University Libraries, held in Brasilia - Federal District). His research was on the *Panorama of the automation plans and projects in Brazilian university libraries*, demonstrated that of the 578 Brazilian university libraries registered in the Coordination for the Improvement of Higher Educational Personnel (CAPES), only 10 had automation systems in operation, 13 in development and 21 in the project phase or with interest in their use. An analytic summary of his research results can be seen in Table 1, which shows the overall data of the data survey, grouped by state:

In his study, Robredo (1981) highlighted that there was “moderate use of terminals in the systems and projects considered, and the predominant tendency to develop one’s own software instead of using existing ones” (p.157): of the 10 academic libraries that already had automation systems in 1981, 8 were developed by the institutions themselves and only 2 were acquired from other institutions.

I would like to make a note in this book of the universities that were pioneers in implementing automation systems in their libraries in Brazil, according to research by Robredo (1981):