RITI-ACCESS PROJECT

Case Study

Program	**RITI E-Governance Self-Initiated Pilot Activity**: Create a National Collective Catalogue that will provide a unified point of access to the bibliographical information all over the country. This catalogue will seek to strengthen cooperation between county libraries and national library, improve the management of these libraries and increase citizens' access to information. Three libraries will be involved in this pilot project, the Braila & Salaj County Libraries and the National Library of Romania.
Period	April 5th, 2004 to August 5th, 2005
Activity	Project Management Plan – including Project Monitoring and Evaluation Methodology
Report submitted by:	**IME Romania** National Library of Romania Braila County Library Salaj County Library

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1. Introduction

This Project Management Plan (PMP) was prepared in accordance with USAID and AED regulations. The PMP was developed by IME Romania in collaboration with the Local Partners (Braila & Salaj County Libraries, National Library of Romania) and can be modified based on discussions with RITI Access Project.

The PMP details the scope, schedule and budget for the project tasks as well as the division of responsibilities for accomplishment by the Local Partners, RITI, TinLib software vendor and Internet Service providers.
A detailed work description, cost-summary table and preliminary schedule outlining the initiation and completion of tasks are included in the PMP.

The purpose of this PMP is to present a detailed plan to meet the requirements of the Pilot Project Collaborative Agreement signed between the Braila & Salaj County Libraries, National Library of Romania and AED / RITI on March 31, 2003.

These requirements include the developing of an informational system, in the pilot stage, within Braila & Salaj County Libraries and National Library of Romania – the Library Informatics System – in order to improve the access to information in Braila & Salaj Counties, also in Bucharest by increasing the transparency, efficiency and responsiveness of county libraries services and NLR. The informational system includes the infrastructure, communication and software applications. The training of personnel involved in the system operation is also included in the project tasks. In this stage, the system will be implemented within Braila & Salaj County Libraries (including Jibou and Simleu Local Libraries – Salaj County) and National Library of Romania. In order to meet the system requirements during the project progress the following tasks must be completed:

➢ Analysis & Planning

ID	Task Name	Duration	Start	Finish
1	**Library informatics system**	**348 days**	**Mon 5/3/04**	**Wed 8/31/05**
2	**Data analysis**	**11 days**	**Mon 5/3/04**	**Mon 5/17/04**
3	**Data collecting**	**5 days**	**Mon 5/3/04**	**Fri 5/7/04**
4	Site survey Braila County Library	2 days	Mon 5/3/04	Tue 5/4/04
5	Site survey Salaj County Library	2 days	Wed 5/5/04	Thu 5/6/04
6	Site survey National Library of Romania	1 day	Fri 5/7/04	Fri 5/7/04
7	**N.C.C. component evaluation**	**1 day**	**Mon 5/10/04**	**Mon 5/10/04**
8	Hardware	1 day	Mon 5/10/04	Mon 5/10/04
9	Software	1 day	Mon 5/10/04	Mon 5/10/04
10	Communications	1 day	Mon 5/10/04	Mon 5/10/04
11	Personnel	1 day	Mon 5/10/04	Mon 5/10/04
12	**Digital Library component evaluation**	**1 day**	**Tue 5/11/04**	**Tue 5/11/04**
13	Hardware	1 day	Tue 5/11/04	Tue 5/11/04
14	Software	1 day	Tue 5/11/04	Tue 5/11/04
15	Communications	1 day	Tue 5/11/04	Tue 5/11/04
16	Personnel	1 day	Tue 5/11/04	Tue 5/11/04
17	**Evidence collection evaluation (Salaj)**	**1 day**	**Wed 5/12/04**	**Wed 5/12/04**
18	Hardware	1 day	Wed 5/12/04	Wed 5/12/04
19	Software	1 day	Wed 5/12/04	Wed 5/12/04
20	Communications	1 day	Wed 5/12/04	Wed 5/12/04
21	Personnel	1 day	Wed 5/12/04	Wed 5/12/04
22	**Extended services evaluation(Salaj)**	**1 day**	**Thu 5/13/04**	**Thu 5/13/04**
23	Hardware	1 day	Thu 5/13/04	Thu 5/13/04
24	Software	1 day	Thu 5/13/04	Thu 5/13/04
25	Communications	1 day	Thu 5/13/04	Thu 5/13/04
26	Personnel	1 day	Thu 5/13/04	Thu 5/13/04
27	**Systems dimensioning**	**1 day**	**Fri 5/14/04**	**Fri 5/14/04**
28	Braila C. L.	1 day	Fri 5/14/04	Fri 5/14/04
29	Salaj C. L.	1 day	Fri 5/14/04	Fri 5/14/04
30	N. L. R.	1 day	Fri 5/14/04	Fri 5/14/04
31	Final analysis	1 day	Mon 5/17/04	Mon 5/17/04

The Analysis & Planning phase was completed, having as output the present Project Management Plan. The above mentioned phase was focused on defining the development and implementation requirements for the Libraries Informatics System.

The analysis was based on the scheme generated by the purpose of project as follows:

- N.C.C. (National Collective Catalogue)
- D.L. (Digital Library)
- EV. (Evidence collection)
- EXT. (Extension capabilities)
- Hard. (Hardware)
- Soft. (Software)
- Comm. (Communication)
- C. (Co funding)
- Y (Implementation in the project)
- D (Development)

Item	Braila County Library			Salaj County Library			National Library of Romania		
	Hard	Soft	Comm.	Hard	Soft	Comm.	Hard	Soft	Comm.
National Collective Catalogue	Y	Y	Y	Y	Y	Y	Y	Y	Y
Digital Library	C	Y	Y	Y	C	Y	C	C	Y
Evidence					Y	D			
Extension					Y				

- ***Acquisition process***

ID	Task Name	Duration	Start	Finish
34	**Acquisition process**	**40 days**	**Mon 5/17/04**	**Mon 7/12/04**
35	**Procurement phase**	**28 days**	**Mon 5/17/04**	**Wed 6/23/04**
36	Hardware procurement documentation	5 days	Mon 5/17/04	Fri 5/21/04
37	Basic software procurement documentation	2 days	Mon 5/17/04	Tue 5/18/04
38	Software application procurement documentation	2 days	Mon 5/17/04	Tue 5/18/04
39	Communication services procurement documentation	4 days	Mon 5/17/04	Thu 5/20/04
40	Request for offer to potential vendors	6 days	Mon 6/14/04	Mon 6/21/04
41	**Offer analysis**	**2 days**	**Tue 6/22/04**	**Wed 6/23/04**
42	Offer selection completed and final rapport	2 days	Tue 6/22/04	Wed 6/23/04
43	**Acquisition phase**	**12 days**	**Thu 6/24/04**	**Fri 7/9/04**
44	Hardware acquisition	12 days	Thu 6/24/04	Fri 7/9/04
45	Basic software acquisition (Win XP)	12 days	Thu 6/24/04	Fri 7/9/04
46	Application software acquisition(Tinlib Z39.50, TinWEB, TinREAD)	12 days	Thu 6/24/04	Fri 7/9/04
47	Communication services acquisition	12 days	Thu 6/24/04	Fri 7/9/04
48	Acquisition completed and final report	0 days	Mon 7/12/04	Mon 7/12/04

➢ ***Installation, configuration and system testing***

ID	Task Name	Duration	Start	Finish
49	**System implementation (development)**	**14 days**	**Tue 7/13/04**	**Mon 8/2/04**
50	**C. L. Braila**	**5 days**	**Tue 7/13/04**	**Mon 7/19/04**
51	Hardware Installation(NCC, Digital Library)	2 days	Tue 7/13/04	Wed 7/14/04
52	Software Installation(NCC, Digital Library)	2 days	Thu 7/15/04	Fri 7/16/04
53	Communication Installation(NCC, Digital Library)	1 day	Mon 7/19/04	Mon 7/19/04
54	System testing (local)	0 days	Mon 7/19/04	Mon 7/19/04
55	**C. L. Salaj**	**5 days**	**Tue 7/20/04**	**Mon 7/26/04**
56	Hardware Installation(NCC, Digital Library, Evidence Collection, Extend	2 days	Tue 7/20/04	Wed 7/21/04
57	Software Installation(NCC, Digital Library, Development)	2 days	Thu 7/22/04	Fri 7/23/04
58	Communication Installation(NCC, Digital Library)	1 day	Mon 7/26/04	Mon 7/26/04
59	System testing (local)	0 days	Mon 7/26/04	Mon 7/26/04
60	**National Library of Romania**	**4 days**	**Tue 7/27/04**	**Mon 8/2/04**
61	Hardware Installation(NCC, Digital Library)	2 days	Tue 7/27/04	Wed 7/28/04
62	Software Installation(NCC, Digital Library)	2 days	Thu 7/29/04	Fri 7/30/04
63	Communication facilities and services set up(NCC)	1 day	Fri 7/30/04	Fri 7/30/04
64	Coordination between databases	0 days	Mon 8/2/04	Mon 8/2/04
65	Whole System testing (local and global)	0 days	Mon 8/2/04	Mon 8/2/04
66	Alpha & beta releases. Final release	0 days	Mon 8/2/04	Mon 8/2/04

➢ ***Users & system administrators training***

ID	Task Name	Duration	Start	Finish
67	**Training (users and system administrators)**	**14 days**	**Tue 8/3/04**	**Fri 8/20/04**
68	**Braila C. L.**	**5 days**	**Tue 8/3/04**	**Mon 8/9/04**
69	Software	2 days	Tue 8/3/04	Wed 8/4/04
70	Communication	2 days	Thu 8/5/04	Fri 8/6/04
71	Cooperative mode training	1 day	Mon 8/9/04	Mon 8/9/04
72	**Salaj C. L.**	**5 days**	**Tue 8/10/04**	**Mon 8/16/04**
73	Hardware (Scanner)	1 day	Tue 8/10/04	Tue 8/10/04
74	Software	2 days	Wed 8/11/04	Thu 8/12/04
75	Communication	1 day	Fri 8/13/04	Fri 8/13/04
76	Cooperative mode training	1 day	Mon 8/16/04	Mon 8/16/04
77	**N. L. R.**	**4 days**	**Tue 8/17/04**	**Fri 8/20/04**
78	Software	2 days	Tue 8/17/04	Wed 8/18/04
79	Communication	1 day	Thu 8/19/04	Thu 8/19/04
80	Cooperative mode training	1 day	Fri 8/20/04	Fri 8/20/04
81	Training completion time	0 days	Fri 8/20/04	Fri 8/20/04

The training will be provided by IME to the Library Informatics System users and system administrators, as follows:

- *Braila County Library*
- Software
- Communication
- Cooperative mode training

- *Salaj County Library*
  - Hardware (Scanner)
  - Software
  - Communication
  - Cooperative mode training

- *National Library of Romania*
  - Software
  - Communication
  - Cooperative mode training

- ***Official launching – press conference and media coverage***

- ***System evaluation and monitoring***

This PMP was developed to complete the project tasks until 5th of August 2005 under the assumption of full funding by the Local Partners, IME Romania Subcontractor and RITI Access Project.

2. Study background

Braila County Library

The most important public library from Braila County is "Panait Istrati" County Public Library that was documentary certified in1881. From 1981, the name of this library is, in fact, the name of a very famous writer, Panait Istrati (1884-1935), who was born in this town.

The old cultural building advanced in time like a modern institution where the traditional methods of reading books are joined with modern services provided to users (electronic dates, Internet web). .

Actually the"Panait Istrati" Braila County Library is on the top of the medium size libraries in our country:

- More than 400.000 library units or more 120.000 titles;
- More than 50.000 people are in this moment library users, this number represents approximately 21% from the target population;
- At the level of library automation, "Panait Istrati" Braila County Library has the second place after Galati city, with more than 110 PC's;
- At present the county library connects all its branches through a Metropolitan Area Network, providing equal possibilities to all city inhabitants to library collections;
- The access support to library collections is assured through an on-line catalogue. This catalogue covers the entire library collections from 1965 till now days, and more than 50 % of the titles presented in the database represents 1945 – 1965 period.

More than 65 % from library users are students into different forms of educations. Braila County Library tries to cover the needs of the above mentioned category of users, but this represents a very critical issue that will be solved by the implementation of the Libraries System, introducing the most required items in digital format. In this way, Braila County Library will provide the necessary publications to each user who has a PC connected to Internet. By developing and implementing this dedicated library software applications, the Libraries System will start to resolve specific problems that Braila County Library has to deal, with direct implications in the services provided to the citizens – library collections/National Union Catalogue that will be a true Inter Library Loan Service.

Salaj County Library

The idea of a community public library for Zalau dates from the end of the 19th Century when Salaj organizations such as ASTREI, the Teacher's Association, and the Women's Association were all active in promoting reading as a way to improve the cultural life of the region. At the same time, local leaders such as Gavril Trifu were fighting to establish a "library of the people". As part of a national reorganization of libraries in Romania, a community library was established in Zalau in 1950. Two years later it became a regional library and in 1957 was named the

"Ionita Scipione Badescu" Library to honor one of the most important cultural leaders from Salaj. During the next ten years the Salaj library was a subordinate of the Cluj Library, but it continued to build its collection of books and to develop services to meet the local cultural and educational needs. In 1968 the I. S. Badescu Library of Zalau became independent and was given the status of official County Library of Salaj County. As Zalau began to develop economically and expand its population, it grew in importance and was elevated to the status of a Municipality in 1979. This community growth was supported and sustained by the County Library which became more and more an important leader in local cultural and educational activities.

As a County institution supported by funds from the Salaj County Council, the I. S. Badescu Library has a mission to operate primarily to meet the needs of its users. Since 1990, the Library has undertaken a program of self analysis to study its operations and create a rational, achievable development program. The objectives established by this analysis were:

- Secure adequate space for the library services;
- Provide adequate personnel to serve the needs of the whole County;
- Modernize operations thru using computer technology and databases;
- Achieve a suitable balance between old and new publications;
- Meet the users requests for advanced information;
- Cooperate with other public libraries;
- Better use the mass media to increase public awareness of our services.

While all of these objectives have not been fully completed, Salaj County Library has achieved a remarkable success rate and continues to progress rapidly.

LIBRARY PUBLIC SPACES

The I. S. Badescu Library is housed in three separate historic buildings with a total floor space of 950 sq meters. This space is organized as follows:

THE ADULTS' LIBRARY with over 77,000 volumes, more than 50% of which are directly accessible to users. Many cultural activities are organized by this section including a Literature Club for aspiring young writers of poetry and prose. As a part of the Learning Resource Center sponsored by Humana Foundation, this section has a room devoted to personal audio equipment and associated electronic educational materials and also a Health Information center containing all of the health education books and materials.

THE READING ROOM has 60 comfortable spaces with chairs and tables and a collection of 58,000 reference works in Romanian and foreign languages, many of them very recent. It also contains many rare and historic books and documents.

THE PERIODICAL READING ROOM containing 15 reading spaces and at least 7,500 volumes of newspapers and magazines from over 45 different subscriptions to both foreign and Romanian publications. Here users are also provided with access to the LEX EXPERT legal database and other Bibliographic services.

THE INTERNET ROOM started in 2002 with funding provided by AOL through the US Peace Corps and at present has 4 computers offering users free access to educational and information sites.

THE CHILDREN'S LIBRARY serves children up to age 14 and has 26,000 books ranging from preschool stories to literature in foreign languages, 96% of which are directly accessible to users. This section also contains part of a Learning Resource

Center being developed in the Library's buildings. Here are 3 computers with free Internet access and a printer; interactive educational software/CD's for independent learning and study opportunities in foreign languages, health, and general topics; and a video viewing center with informational videos and films in English, Italian, and Romanian. Here children can also have access to an electronic as well as a printed copy of the complete Children's Encyclopedia Britannica. In addition to information, the Children's library offers a space dedicated to games, puzzles and children's activities organized by the library staff.

PERTINENT FACTS:

- Serving a population of 248,407 citizens throughout Salaj County;
- Over 5,000 new users request library cards annually, 80% of which are students from local schools and Universities;
- 79,670 users annually- average of 300 users per day, five days a week;
- Over 159,000 requests for documents, publications, and books are
  - processed each year;
- A collection containing 172,161 items, (163,730 books); 6,000 new
  - materials/books acquired annually. Categories of materials include:
  - books, serial publications, maps and atlases, printed music and
  - records, audiovisual materials (disks, audio and video cassettes,
  - CD's), electronic documents (CD's and databases), photos, archival
  - materials and historic documents, flyers, posters and brochures;
- 31 employees, 23 professional Librarians, 72% of which have University Degrees;
- Since 2002 the Library has been supported by the Friends of the Library, a non-profit organization dedicated to improving the programs and services of the Library.

LIBRARY SERVICES

- Book Acquisition and Processing;
- Media and Community Relations;
- Special Collections (ancient and rare printings, manuscripts and other publications);
- Electronic Bibliographical databases and information;
- Supervision and Professional training for other librarians in Salaj County;
- Internet, Data Processing and Printing;
- Bookbinding;
- Special Cultural Activities (poetry series, meetings with authors, book launching and signings, expositions);
- Learning Resource Center.

The Library is a single resource that can meet community needs in many categories: education, information, cultural activities, use of leisure time, and personal development. It provides not only the means for preservation of Salaj historic past, but also the information tools that will help Salaj County achieve its full future potential.

The National Library of Romania

The National Library of Romania is one of the most important cultural institutions of the country by:

- its role of custodian of part of the national heritage;
- the high concentration of the nation's written treasures of its collections;
- its role of co-coordinator of the nation's libraries;
- providing national services to the nation's libraries and population.

The National Library is dedicated to documentation of the cultural, economic and scientific development of the Romanian people and to provide an effective gateway to national and international sources of information.

The first legislative texts concerning public libraries in Romania were drawn up in 1831-1832 and went into effect in 1833 stipulating the founding of the Central Library in Saint Sava College (Bucharest) and the Library of Craiova, the capital of the province Oltenia.
The law required that the most precious books and manuscripts from all the Wallachian monasteries, bishoprics and churches as well as those from the Bucharest Metropolitan Bishropic Library were to be gathered in the Central Library in Saint Sava College Bucharest. The same regulation established legal deposit for books and periodicals.
After the union of Moldavia with Wallachia in 1864, the Regulation for Public Libraries was adopted. It was the first official Romanian state act to provide for a "national library system". In the first chapter it was stated the role and the tasks of the **Central Library of the State from Bucharest**. The library had an encyclopedic profile, including "all kind of books in all languages", as well as "manuscripts, maps, lithographs, engravings, medals, coins and other numismatic collections etc." The library had a central position and role, receiving books and money from the state and it had the mission of providing publications to all libraries (didactic and communal) of the country.

Although during the years it had fulfilled all the tasks of a modern national library, the actual recognition as *The National Library of Romania* came only in 1990 - by means of The Romanian Government Decree No. 5/1990.
According to the tasks it fulfils, the National Library is:

- **National Bibliographic Agency** which creates "The National Romanian Bibliography" with the series "Books, Albums, Maps" (24 issues a year), "Serials" (2 issues a year), "Official Publications" (2 issues a year), "Music Scores. Records. Cassettes" (4 issues a year);
- **Central Agency for legal deposit of the state**;
- **National Agency for Union Catalogues** that processes the data and publishes "The Union Directory of the Foreign Books in the Romanian Libraries" (yearly) and "The Union Catalogue of the Foreign Periodicals in the Romanian Libraries" (4 issues a year);
- **Central Agency for the International Exchange and Interlibrary Lending** (with about 1500 partners all over the world);
- **National Clearinghouse and Redistribution Centre for Duplicates**;
- **National Central Agency for Documentation in Culture;**
- **Office for Centralized Service to Libraries** (cataloguing and classification), for record-creation and distribution of the printed catalogue-cards in Romania;

- **National ISBN and ISSN Agency**;
- **Methodological Central Agency for Libraries in Romania** that publishes materials in library science documentation: "Librarianship. Collected Adapted Translations" (4 issues a year), "Abstracts in Library and Information Science" (12 issues a year);
- **National Laboratory for Book Restoration and Pathology** that publishes "Issues in Book Pathology" (yearly).

The National Library's collections - encyclopedically in character - are of great value and variety. Its buildings in Bucharest and in the country (in Alba-Iulia and Craiova) house around 13,000,000 bibliographic units. Out of these, two thirds are not accessible because of the chronic lack of adequate storage and circulation space - the present quarters (4, Ion Ghica Street), in the former building of the Stock Exchange that operated up to 1948, is absolutely non-functional and over-cramped.

The wealth of the National Library includes incunabula, old Romanian and foreign rare books by famous printers: Mentelin, Guy Marchant, Pruess, Frobenius, Manutius, Elzevier, Feodoroff, Plantin etc. Also of outstanding value are the collections of manuscripts, prints, maps, rare records and music scores, photographs, ex-librises and historical documents.

According to its encyclopedically profile, the library possesses 12 specialized reading rooms that seat around 300 people. During the last period the Library's readership has come to such average yearly parameters as:

- registered readers: 22-23,000;
- rate of attendance: around 60,000;
- circulation of bibliographic units: about 650,000;
- interlibrary lending (within the country): 5,000 bibliographic units.

The Special Collections Department is located and functions in the house of the "Brătianu" Cultural Establishment.
The special collections owned by the National Library of Romania include important materials in the following categories of graphic and audio-visual documents:

Foreign books:

Incunabula: 162 vols.
Old books (16th-18th centuries): 17,950 vols.
Rare books (19th-20th century): 4,961 vols.

Romanian books:

Old books (16th-19th centuries): 2,250 vols.;
Rare books (19th-20th century): 6,153 vols.;
Old and modern manuscripts;
Music records and scores;
Prints;
Archive documents;
Photographs, photographic archive and illustrated postcards;
Cartographic materials.

The collection of manuscripts includes valuable Oriental items (the Coran in Turkish and Arabic) and Romanian items in Cyrillic like "Pomelnicul de la Cozia" (The Cozia Diptych), as well as Latin, French, German, Hungarian, Greek and Italian items. It

also contains modern manuscript texts of many important Romanian writers, like: Al. Odobescu, Mircea Eliade, Duiliu Zamfirescu etc. and foreign authors, like Maupassant, Heinrich Mann and others.

The prints section includes an important number of Japanese items signed by masters of the genre like Hokusai and Utamaro. The archive of historic documents brings together materials of great importance in national and European history.

Out of the rare pieces of the music collection we should mention: the manuscripts of Romanian old church music (18th century), one copy of the original edition of "Tamerlane" by Haendel (London, 1724) with the composer's original notes, the script of "Manon Lescaut" with Massenet's autograph dedication a.s.o.

The photographs' section comprises in a rich collection of historical photographs (around 70,500 items). On this basis the Photographic Archive of the National Library is being organized at the moment.
The cartographic section owns a treasure of extremely valuable materials among which one will find "Tabula Pentengeriana" (4th century) as well as many maps from the 16th-18th centuries.
The Special Collections Department has two reading rooms: the Great reading room and the music room.

The Laboratory for Book Restoration and Pathology

Created in accordance with Law No.63/1974 as regional laboratory for book restoration and pathology, it has been structured as a specialized department within the National Library of Romania, depending upon it as far as its organization and functioning are concerned. Through its two sections the laboratory ensures the cure and re-introduction into the circulation of the items that suffered physical, chemical or biological damage. In spite of its meager material resources the results of its work and cures are very good.

The laboratory also provides specialized assistance to several cultural institutions in Romania on a service-by-request basis or in the form of professional training courses organized according to an agreement concluded between the National Library of Romania and the Center for continuing education of the professionals in the fields of art and culture.

The "Batthyaneum" branch in Alba-Iulia

The building that houses the National Library's branch in Alba-Iulia is an outstanding monument in architecture. Monastery of the Trinitarian monks between 1719 and 1784, in 1792 it was turned into astronomical observatory and library. The founder of the establishment was Transylvanian Bishop Ignatius Batthyáni, owner of a valuable library that he left in his will to the municipal authorities of Alba-Iulia on condition that its destination of public cultural institution should not be changed.

The "Batthyaneum" collections include over 65,000 bibliographic units, among which:

- Old and rare books (Romanian and foreign): 61,683 vols.;
- Incunabula: 603 vols.;
- Manuscripts (9th-18th centuries):1,600.

The books and manuscripts of these collections are adequate mainly for research purposes.

The manuscript collection includes two items of outstanding document and artistically value: *Codex Aureus* (9th century) and *Codex Burgundus* (15th century).

The collections of manuscripts and old or rare books of the Batthyaneum Branch of the National Library of Romania have in time been enriched through acquisitions and gifts so that this institution has become an important research center in bibliophily. Every year the branch is visited by a great number of personalities from Romania and abroad.

The "Omnia" French literature branch in Craiova

The "Omnia" branch was created on May 25, 1990, at the initiative of several intellectuals in Craiova, with the support of the "Liviu Rebreanu" French-Romanian Institute and of the Municipality of Lyon. To the first gifts of books - that arrived in Craiova in the spring of 1990 - there have been added later acquisitions and gifts received from Romanian and foreign institutions.

Its collections are of about 40,000 bibliographical units and its readership numbered 3,000 registered users in 1999. The "Omnia" branch has a lending service point and two reading rooms for books and serials. The bibliographical records of the collections are at the moment being transferred to a computerized system. The collections include books and serials in such subjects as fiction, history, philosophy, psychology, religion, sciences but also reference works (encyclopedias, dictionaries, etc.), art albums, collections of photographs and textbooks.

The "Omnia" branch organizes conference-series on topics in French history, civilization and culture.

The main objectives of the National Library of Romania, as the most important library in the country with a leading role in the national library system, are detailed as follows:

- acquire, process, preserve and valorize documents of the national patrimony;
- provide access to its entire collections for all users;
- creation of the automated national library system interconnected to other library systems in the world;
- cooperation with the libraries from Romania and abroad;
- coordination of the public libraries.

The National Library of Romania, despite of the poor financial support, is continuously working for improving the quality of its services. The process of automation of the library system started in 1985. For almost ten years the National Library of Romania is using TinLib integrated library software. Our database includes over 270.000 bibliographic descriptions of books, articles and periodicals.

As coordinator of the national library system the National Library of Romania has elaborated a strategy for the modernizing of the library services. The very first step of this strategy is the creation of the National Union Catalogue – a service that will provide to all users (specialized and non-specialized from Romania and abroad) free access to the entire bibliographical and full text information from all the library databases of the country. It will also offer inter-library loan service that will meet the

user's demands for quick and effective access to electronic information resources. The National Union Catalogue will involve a considerable decrease of the operating costs. The RITI Access project gives the opportunity to create a pilot stage of the National Union Catalogue within Braila and Salaj county libraries and National Library of Romania.
The specific objectives of the National Library of Romania in the project are the following:

- server upgrade in order to meet the goals of creating a unified point of access to the bibliographical information;
- web interface for the online catalogue;
- Z39.50 software which will provide access to the library database.

The benefits of the project for the National Library of Romania are huge. First of all, the creation of a pilot stage of the National Union Catalogue will prove that such an important and long time desired task is possible to be accomplished. This project will become a model for all the libraries in the country.

The amount of necessary investment founds and the difficulties of covering the technical aspects, determined the Braila County Library, Zalau "Library Friends" NGO, Salaj County Library and National Library of Romania – as coordinator of the national library system – to look for a partner, who can cover part of the necessary funds and provide the needed technical consultancy.

This partner is AED/RITI Access Project – who accepted this position, due to the fact that one of the RITI's primary thematic objectives is to employ innovative uses of information technology to promote e-governance and NGO strengthening in order to obtain increased information sharing, improved linkages between the public and private sectors and also between the local and national public structures.

RITI Access accepted co financing the "Library Informatics System" and after signing of the Pilot Project Collaborative Agreement with Braila County Library, Salaj County Library and National Library of Romania, on March 31st 2004, RITI selected IME Romania as Partner / Subcontractor for the implementation of this pilot project.

According to the Fixed Price Purchase Order and Statement of Work for IME Romania, signed on May 5th, 2004, IME Romania in close cooperation with Local Partners prepared this project plan in order to nominate the project goals, to schedule and plan the necessary tasks and to establish the roles and responsibilities of the involved parts.

3. Project purpose

This project will develop an integrated library system and improved communication facilities and services. The beneficiaries will be Salaj & Braila County Libraries and the National Library of Romania. The linkage of both county libraries to the National Library of Romania will be the background for the National Collective Catalogue.

Three modules of TinLib software (TinLib Z39.50, TinWeb and TinRead) will be implemented by IME Romania. Communications between the National Library of Romania and the remote county libraries will be based on a specific online information module TinLib Z39.50 having as an interface the TinWeb module.

The National Collective Catalogue will enable online access to other libraries databases and the collective database will be published on the Internet, using the TinWeb module as a web gateway. Worldwide users will be able to browse the Collective Catalogue.

4. Team, Customers and Stakeholders Identification

4.1 Team members

Team member	Role	Company/ Organization	Telephone	E-mail address
Laura Popa	Project Manager	RITI Access	021 212 39 29 0788 322 452	laura.popa@riti-access.ro
Mihai Ionescu	Senior Technical Specialist	RITI Access	021 212 39 29 0740 100 911	mihai.ionescu@riti-access.ro
Noelle LeBlanc	Project Consultant	Peace Corps Volunteer	0260 632 014	Neleblanc2003@yahoo.com
Constantin Dimcea	Subcontractor Project Manager	IME Romania	021 323 61 04	cdimcea@ime.ro
Marian Arapu	Technical manager	IME Romania	021 323 61 04	marian@ime.ro
Andrei Stroiescu	Application developer in Databases & Programming & Communication	IME Romania	021 323 61 04	andrei@ime.ro
Mihaela Bora	Methodological & training project coordinator	IME Romania	021 323 61 04	mihaela@ime.ro
Mirela Ionescu	Financial & Monitoring coordinator	IME Romania	021 323 61 04	mirela@ime.ro
Dragos Neagu	Deputy Director / BCL Representative	Braila County Library	0239 619 590 0766 443 715	dragos@bjbraila.ro

Mariana Carpineanu	President of Zalau „Library Friends" NGO / Project Responsible	Salaj County Library	0260 632 014 0742 546 598	prietenii_bib@yahoo.com

4.2 Roles and responsibilities

Roles and Responsibility Matrix: Deliverables **(see Work Breakdown Structure)**	**RITI-Access Project Director**	**Subcontractor Project Manager**	**RITI Project Manager**	**AED/RITI-Access Team**	**Subcontractor team**	**BCL**	**SCL**	**NLR**
Data analysis	N	A	A	R	C	I	I	I
Data collecting	N	A	N	I	C	I	I	I
N.C.C. component evaluation	N	A	N	I	C	I	I	I
Digital Library component evaluation	N	A	N	I	C	I	I	I
Evidence collection (Salaj)	N	A	N	I	C	I	I	I
Extended services(Salaj)	N	A	N	I	C	I	I	I
Systems dimensioning	N	A	N	I	C	I	I	I
Procurement documentation	N	A	N	I	C	I	I	I
Hardware procurement documentation	N	A	A	I	C	I	I	I
Basic software procurement documentation	N	A	A	I	C	I	I	I
Communication services procurement documentation	N	A	A	I	C	I	I	I
Offer analysis	N	A	R, A	I	C	I, R	I, R	I, R
Acquisition phase	N	A	R, A	R, I, A	I	N	N	N
Hardware acquisition	N	A	R, A	I, A	I	N	N	N
Basic software acquisition (Win XP)	N	A	R, A	I, A	I	N	N	N
Communication services acquisition	N	A	R, A	N, A	I	N	N	N
Acquisition completed and final report	N	A	N, A	N, A	I	R	R	R
System implementation (development)	N	A	A	N	C	I, R	I, R	I, R
Application Installation & Configuration within: Braila County Library	N	A	A	N	C	I, R	I, R	I, R
Salaj County Library	N	A	A	N	C	I, R	I, R	I, R
National Library of Romania	N	A	A	N	C	I, R	I, R	I, R
Communication installation and configuration for remote locations	N	A	A	N	C	I, R	I, R	I, R
System Tests	N	A	A	N, A	C	R, A	R, A	R, A
Set up training environment for administrators (BCL, SCL. NLR)	N	A	A	N	C	I, R, M	I, R, M	I, R, M
System administrators training (BCL, SCL, NLR)	N	A	A	A	C	I, R, M	I, R, M	I, R, M
Set up training environment for users (BCL, SCL, NLR)	N	A	A	N	C	I, R, M	I, R, M	I, R, M
Users Training (BCL, SCL, NLR)	N	A	A	N	C	I, R, M	I, R, M	I, R, M
Monitoring & Evaluation	N	A, I	A	R, I	C	I, R	I, R	I, R
M&E reporting results	N	R, A, I	R, A, I	R, I	C, M	R	R	R

Responsibilities:
A - Approves the deliverable
R - Reviews the deliverable (and provide feedback)
C - Creates the deliverables
I - Provides input
N - Is notified when a deliverable is complete
M- Manage the deliverable

Legend:
BCL – Braila County Library
SCL – Salaj County Library
NLR – National Library of Romania

4.3. Customers

The main customers for the Library Informatics System are:

- Braila County Library and the population in the area of Braila County;
- Salaj County Library, Simleu & Jibou local libraries and the population in the area of Salaj County;
- National Library of Romania and the Romania & worldwide users.

4.4 Stakeholders

The Library Informatics System stakeholders and their expectations from the project are the following:

1. Braila County Library

- Creating a digital library, a modern infrastructure that can be used for future developments;
- Developing a National Union Catalogue – a true Inter Library Loan service;
- Better communication between the Braila County Library and its branches and also between Braila County Library and the other county libraries;
- Promoting increased transparency and responsiveness of Braila County Library services;
- Improving the efficiency of book delivery process at county level which should result in reduced operational costs;
- Improving the accuracy of the book descriptions/presentations available to readers;
- Stimulating management strengthening and promote digital library which should lead to greater transparency, efficiency and readers' participation;
- Easy monitoring and control of all the activities within Braila County Library.

2. Salaj County Library

- Completing an electronic database of all the Salaj County Library's books, newspapers, documents, periodicals, etc.;
- Creating a modern infrastructure that can be used for future developments;

- Developing a National Union Catalogue;
- Providing automated borrowing book services for readers;
- Improving the efficiency of book delivery process at county level which should result in reduced operational costs;
- Increasing citizens' satisfaction and interaction with the its branches (Simleu and Jibou) and public institutions;
- Promoting increased transparency and responsiveness of Salaj County Library services;
- Easy monitoring and control of all the activities within Salaj County Library.

3. National Library of Romania

- Creating a modern infrastructure that can be used for future developments;
- Creating an automated national library system interconnected to other international library systems;
- Developing a National Union Catalogue;
- Processing, preserving and valorizing all the documents of the national patrimony;
- Developing and maintaining the public counties libraries network in Romania;
- Adding functionality to its services provided to the public;
- Improving access to information and reducing the redundant costs of cataloguing data;
- Better collaboration with all the Romanian county libraries;
- Increasing the efficiency of work at the national level;
- Improving the efficiency of book delivery process;
- Easy monitoring and control of all the activities within National Library of Romania and other county libraries – parts of the system.

4. RITI Access Project

- Increasing the transparency, efficiency and responsiveness of public services;
- Training of the Braila & Salaj County Libraries and National Library of Romania's personnel in the effective use of information and communications technologies;
- Improving of the decision – making process;
- Increasing information sharing within and between National Library of Romania and Braila & Salaj County Libraries and their branches;
- Replication possibility across Romania.

5. Local Libraries - branches of Braila & Salaj County Libraries

- Better services provided to the citizens;
- Communication and cooperation with other local libraries;
- Reducing the costs associated with the provided services;
- Increasing the efficiency of work within the local libraries;
- Specialization of librarians in using new dedicated library software application and Internet.

6. Citizens in Braila & Salaj Counties & Bucharest

- Improving access to information;
- Faster response to their requests;
- Better services.

7. On-line readers

- Access to the entire bibliographical and full text information from Braila & Salaj county libraries and National Library of Romania's databases;
- Inter-library loan service;
- Instant information available for all readers;
- Better services

5. Critical Assumptions

The National Collective Catalogue is a priority for the Romanian Public Libraries.
The resources furnished by the Local Partners (Braila & Salaj County Libraries and National Library of Romania) shall have a minimum value of $xxx.xxx USD.
The resources furnished by AED / RITI Access shall not exceed the total value of $xxx.xxx USD.
The project must be fully operational until September 2004.
Recurring costs minimization by using of the existing computers in the remote locations.
The implemented system must be self-sustainable: the Local Partners must support all the maintenance recurring costs past project founding.
The software application must be customized in order to fulfill all requirements defined at the Salaj County Library level.

6. Constraints

The following constraints were identified:

Costs

- the total budget of the project;
- the recurring costs of system operation must be minimized in order to be supported from the budgets of the local partners.

Time

- the corresponding period of time for sending the RFQs to the main players on the domestic market for the required hardware components & Internet services providers and selecting the best ones;
- the project must be completed until the end of August 2004;

Human

- the general skills level of computer literacy of the libraries staff;
- the system will suit the administrators' needs and thus they will want to use and expand the system.

Technological

- existing networking and communication infrastructure is very poor in the Braila and Salaj counties;

- the project should implement an open platform ready for future developments and new TinLib software modules addition.

Legal

- the acquisition of hardware equipment must be done according to the Romanian law regarding public acquisition;
- the selection of local ISPs from Braila & Salaj counties must be done according to the Romanian law regarding public acquisition.

7. Scope of Work

This section summarizes the key products (deliverables) and major study investigations that had taken place so far, and outlines the communication plan for the Libraries Informatics System.

7.1 Key Products

This project presumes to start off the cooperative work module of public libraries in Romania and modernize the traditional library services.

In the future it will be possible to define clearly the moment when public libraries in the country, through this "pilot" have done a huge qualitative leap from on the dot approaching to the national bibliographic vision. The leap is represented by a unique point of access to national bibliographic information, detained by many institutions. Plurality of offices and unitary organization of total bibliographic information existing at all of our partners engaged in this project will constitute the first national catalogue.

7.1.1 National Collective Catalogue

Two modules of TinLib software will be implemented as follows:

TinLib Z39.50 – This standard is a "SQL" for library systems standard allowing one software system to communicate online with another via such Z39.50 formatted requests. This module will be used taking into consideration the fact that both Salaj & Braila County Libraries and the National Library of Romania need to participate in a shared project and to join databases allowing each other online access to information. Each library system will have this TinLib Z39.50 software module running. The use of Z39.50 protocols allows other users to join the project even if they use another integrated library system and also allows the participation of Local Partners to worldwide collective databases.

TinWeb – Using TinWeb module, both Salaj & Braila County Libraries and the National Library of Romania will automate their processes. This module of the integrated library system will be the gateway between the http protocol (web page) and libraries databases. All the data will be connected to a web page and will be browsed, searched, viewed accessing a web page. The connection will be bidirectional, the data from libraries collection will go to users and users' data requests will be sent to librarians.

1. National Collective Catalogue (NCC)

In order to develop and maintain a unique point of access, named NCC (National Collective Catalogue), there are many types of implementation. The model selected by IME & Local Partners for this project is the "star" type, with a central node and "satellites" which caters the central node with information. Inside this typology, the following functional module is needful:

Access point (principal node)

This component represents, from functional point of view, the final interface with the user, his point of access to the whole system.

The access to the system will be realized with a web browser aid, without installing further software; the whole application will be "web site" type.

From the constitutive elements point of view, this access point includes the following:

Hardware

- dedicated server, dual processor, etc.;
- backup components;
- communications equipment;
- UPS

Software

- operation system (from functional reasons and technical performances – UNIX);
- Internet services (http server, https, email, ftp, etc);
- security system;
- dedicated application (php, java, etc);
- local databases online interrogation possibility;
- domain standards observance (Unicode, UNIMARC, Z39.50, TCP/IP, etc);
- multicasting appeal.

Communication services

- visibility from metropolitan, RONIX, international;
- peering with dedicated networks ex: RoEduNet;

Training

- user manuals' elaboration;
- training personnel.

Local data bases

Each of the NCC partners (National Library of Romania, Braila County Library, Salaj County Library) will authorize the access to integrated library system (ILS – Integrated Library Software) used for activities automation (TinLIB in each of the three cases).

Common work principle is the one who presumes minimum perturbation of library's activity and work procedures. So, in the ILS system will not be introduced any supplementary information by the personnel who process collections and it will not be operated any supplementary processing.

The only "interaction" with NCC will be that from the Central Point will be initiated demands (interrogations) of the local database. These demands will be treated online exactly like a demand came from a local client (which will access the OPAC module – Open Public Access Catalogue).

Consequently, the Central Point is a "user" of each local database. His contribution to the whole structure is an integrator one. The Central Point is not an "integrated system", actually represents an "integrator of systems".

The communication protocol between the Central Point and databases included in NCC ("real" databases, distantly geographic) will be the Z39.50 bibliographic information interrogation standard.

Therefore a local database supposes an ILS to exists, endowed with the server module Z39.50. This server allows online interrogations and it assures the NCC standardization to allow the extension with new members, no matter what ILS system is used.

For system exploitation in proper working conditions of entire NCC ensemble, the system administrators' training is necessary for each of the local databases.

The implementation diagram of the two NCC components is detailed below as follows:

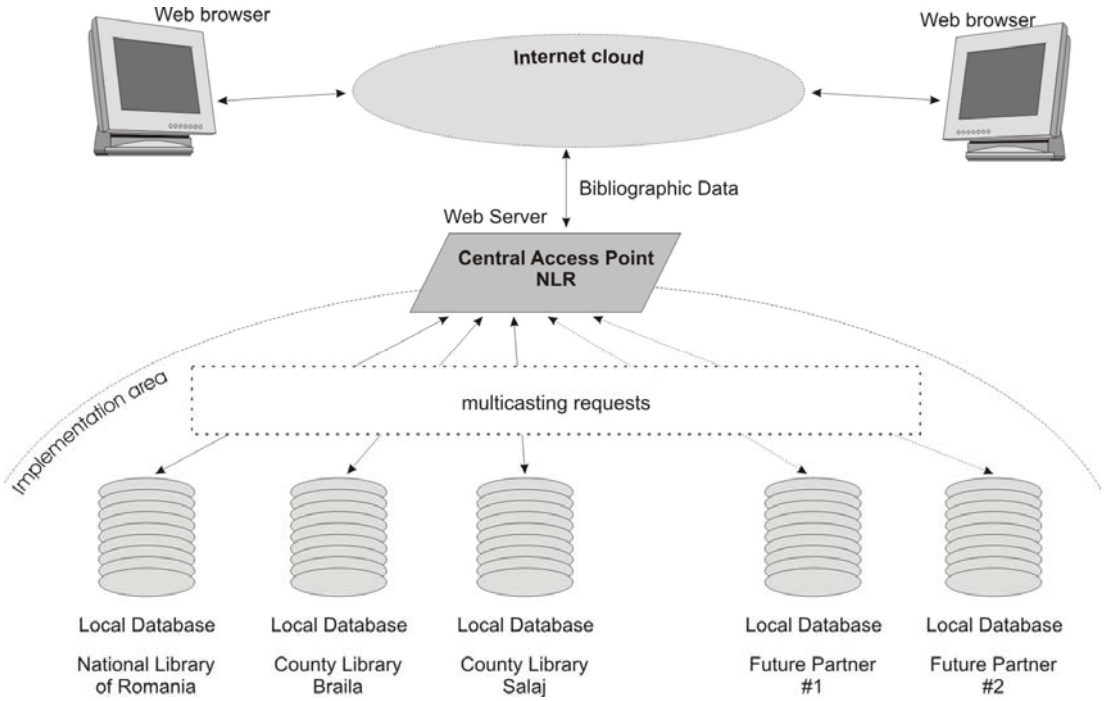


Fig. 1

This diagram presents how the communication is performed from the server (NCC system) to the client. The client used to access the system is a standard web browser (Internet Explorer, Netscape, Mozilla, Opera, etc.). The application is a

web page that can be accessed by any user. The type of the connectivity from client (user) to the server (NCC) must be the Internet protocol TCP/IP.
Generally speaking the connection could be: dial-up, cable, T1, ISDN, Optical Fiber, VSAT, etc. As long as a client can "ping" the server and a connection to the NCC web page can be performed, the system can be used by the client.
As a conclusion to the above mentioned aspects, it is not necessary for the user to be physically at the library in order to access the system, NCC being a web page that can be accessed from home as any other web page.

Also the five mentioned partners are: Braila & Salaj County Libraries, National Library of Romania and two future county libraries/partners. These two extra partners were listed for illustrative purposes in order to highlight that many other partners are interested to join the system. In fact – at present – there are 8 new county libraries that intend to be part of the Integrated Libraries System, as follows: Constanta County Library, Cluj County Library, Bacau County Library, Satu Mare County Library, Arges County Library, Pitesti University Library, Dolj County Library and Galati County Library.

2. NCC staging

NCC achieving, with absolutely novelty title in Romania clearly supposes the synchronizing with users' reactions and "feed-back".

2.1 Minimal functionality

The NCC system has to carry out a minimal functionality at final handing over to be named thus. This implementation supposes:

2.1.1 Standards

- Unicode (standard used for unify the diacritical system used);
- UNIMARC (standard used for bibliographic descriptions unifying);
- ISBD (standard used for bibliographic data representing);
- Z39.50 (standard used for online interrogations and obtaining bibliographic information from the partners).

2.1.2 Functionality

- navigation (list browsing);
- authority folders (validation lists);
- simple searches (on each field separately);
- complex searches (combined, Booleans);
- multicasting (systems integrator);
- halving algorithm and informational noise control.

2.1.3 Outputs

- selecting/deselecting entries;
- email selected results;
- print selected results;
- export selected results (for taking over them locally in user's local database).

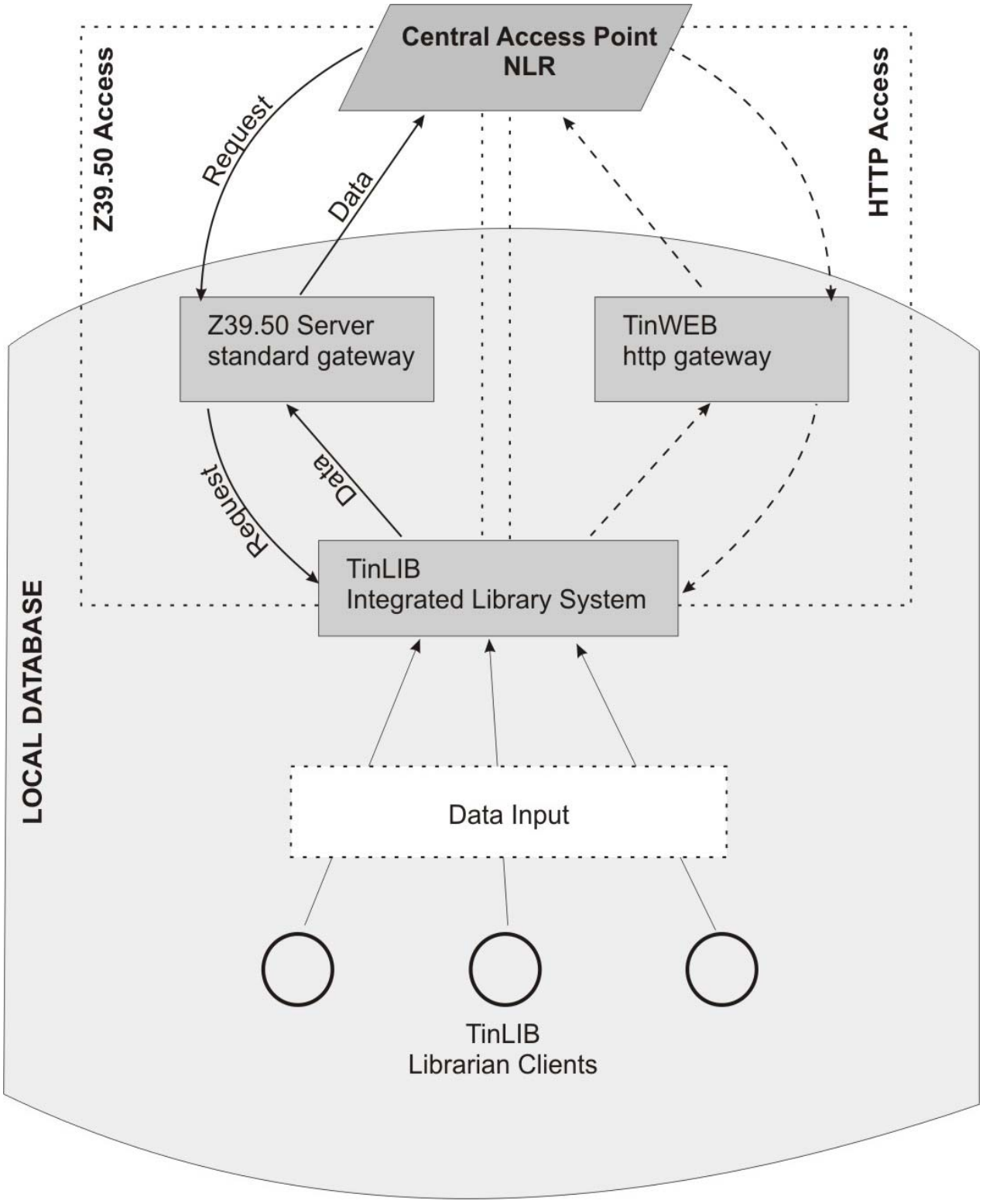


Fig. 2

2.2 Extended functionality

The system will be extended and upgraded on the 12 months of technical assistance in following directions:

2.2.1 Information availability

Completing the system bibliographical information with "in use" information referring at a title availability to be loaned; this information will be available for certain user emerged away.

For an informational flux schematic representation please see figure 3.

The implementation of the component what manipulates the information of project's availability will be done on basis of SIP standard (Standard Interchange Protocol).

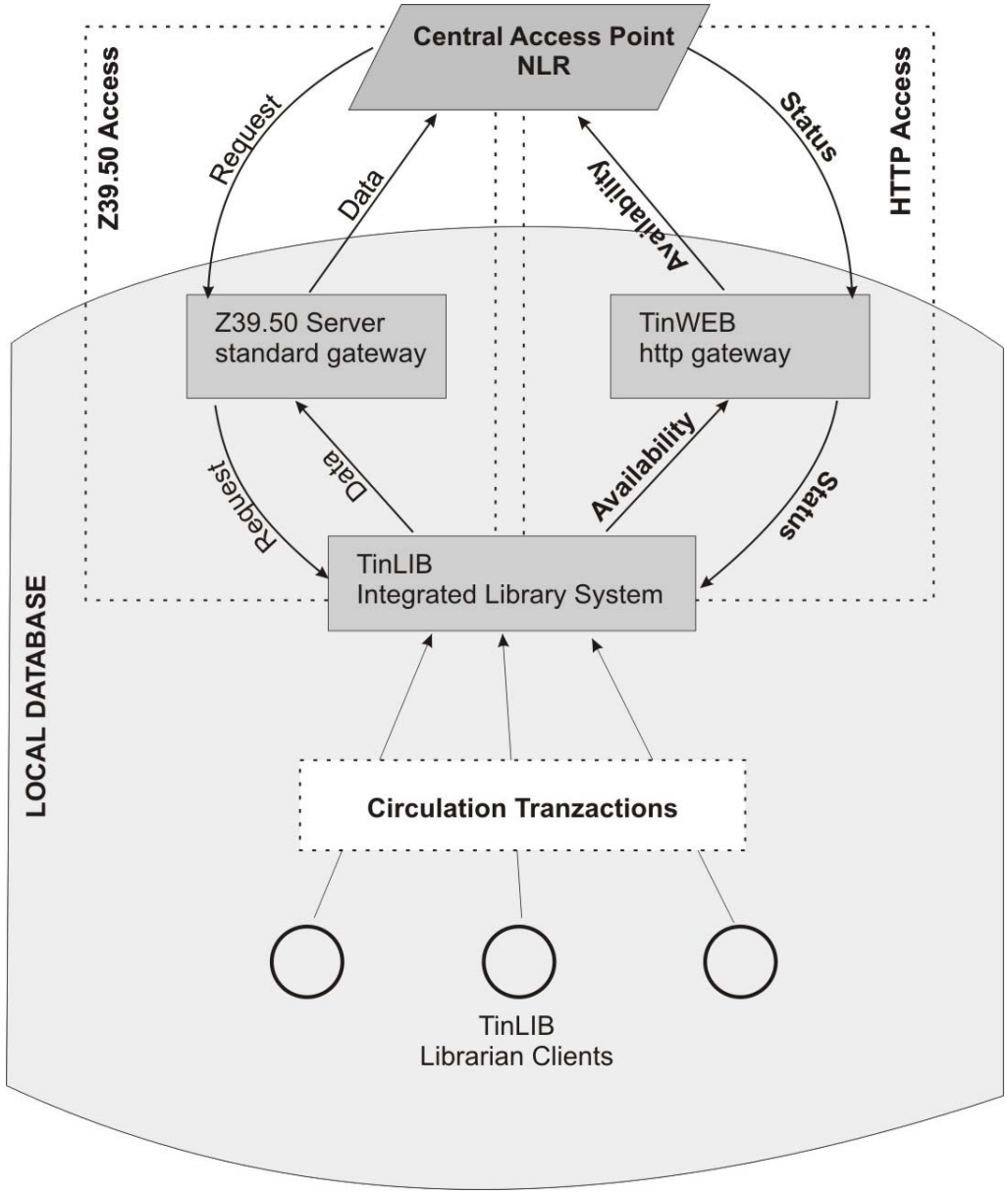


Fig. 3

2.2.2 Distance accessing

The system's project could be loaned from away readers, readers who are not registered with reader license in a certain library. This aspect will deploy either:
through standard procedures of inter-librarian loaning by introducing of an online paying system. This point will be detained inside the Digital Library component.

2.2.3 Feed-back

Based on the resulted feedback from exploitation, new requested record fields for NCC can be created, unnecessary record fields for NCC can be removed and redundant fields for NCC can be joined.

7.1.2 Digital Library

A) Digital Library (DL)

For the digital library, one module of TinLib software – *TinRead* - will be implemented.
TinRead – This module extends the functionality of an integrated library system that handles only bibliographical data with digital content. This digital library module can handle multimedia material (pictures, audio files, video files), full-text (formatted text in HTML, XML, PDF, etc.) and any other digitized material can be transferred via http protocol (web server, web browser). All the digitized material can be stored, retrieved, searched, described ant any level (material structure, text/paragraph description), annotated and handled at different levels of interest. This functionality transforms the entire system (bibliographical data and digital material) into a complex digital library.

The bibliographical information can be completed with multimedia information or more with DIGITAL information. There is a difference between "digital" information (atomized, discreetly form) and "digitized" information (binary represented). A book page is "digitized" and kept as image through scanning and with the procedures of OCR (Optical Character Recognition), it is transformed in text and it becomes "digital" information. This difference is frequent in our domain and it will be used as it is.

The present project for Braila County Library part is completing bibliographical descriptions from the library's catalogue with digitized materials through TinRead module. For digitizing and information storage, different hardware equipment - included in the project as cost share - will be used (scanners, storage).

In compensation, Salaj County Library's personnel will scan and digitize a huge volume of periodical magazines represented by old journals using hardware equipment (scanner and storage) obtained from the financer and the software module needful to launch the system will be bought from self resources as co-financing.

The above mentioned digital library will take into consideration the following:

1. *Hardware*

From the modules implicated in Digital Library point of view this part is related to a Central Point, perfectly similar to the one described inside the NCC component, to the

bibliographical database/databases and finally to a "repository" server which contains the digitized representations of the writings.
The used hardware equipment to implement the Central Point of DL and the "repository" type of server also will be the same that is to say "Dual Intel Server" as it was specified in the project.
This Central Point will be implemented as a subordinate point perfectly identical with the NLR Central Point, consequently it will constitute a back-up, an alternative solution to NCC access and more than that, it will allow the access to all records within NCC.

2. Software

The TinREAD software component has online interface with the TinLIB (ILS) library system in order for users/readers to consult the catalogues. When a document is identified, its content can be accessed - partially or integrally - by using the resources (folders) that contain its digitized form (or digital form).

Using bibliographical information or other type of information, the document is uniquely identified. With this "acronym" of document, the TinREAD system accesses the structure scheme of Digital Library (DL) and identifies the resources that contain the digitized information. This could be only one folder or maybe more. It is preferred to assemble every part of the document/writing in only one PDF folder. When the identification is done, the folder will be sent to the user according to his request.

In this way the Bibliographical Catalogue is extended with all the information of the document/writing, becoming a Digital Library. The material types that could be included in the Digital Library are: html, xhtml, xml, pdf, rtf, pictures, sounds, movies, etc., any material type that could be accepted by "web server – http protocol – web client" assembly.

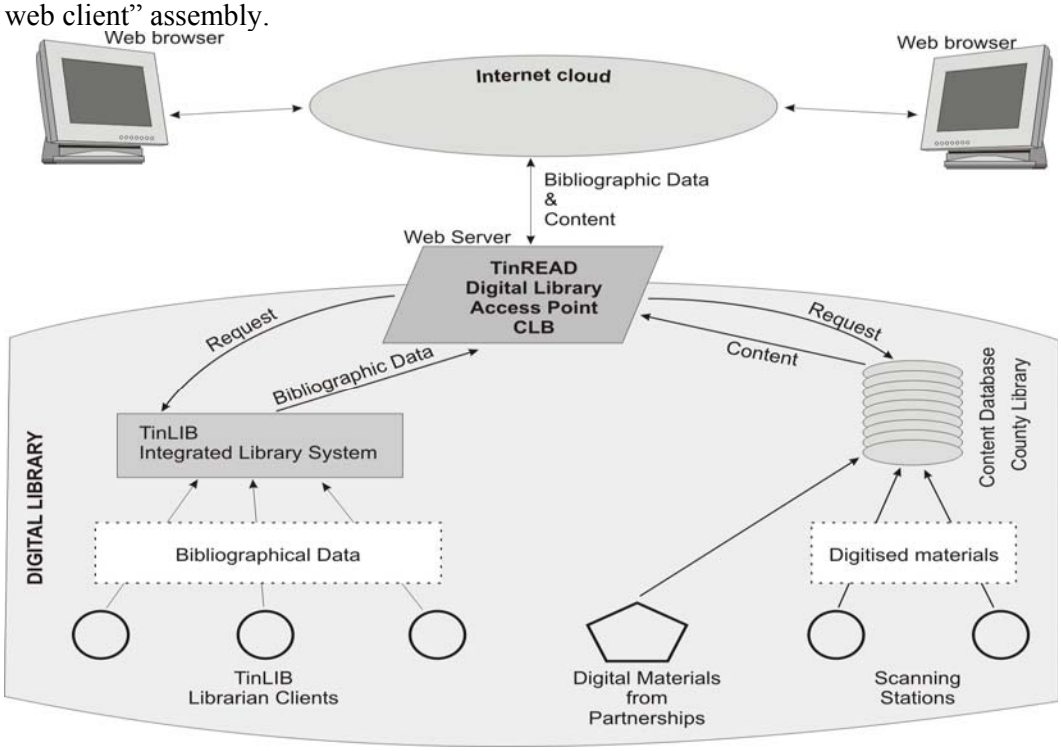


Fig. 4

3. Communications

3.1. Functioning conditions

For proper system functionality, the following aspects should be taken into consideration:

- the access of numerous users to the system;
- the digitized information transfer to users;
- the access to our own readers (Braila County Library's) within the system supposes to develop the WAN network of the library as cost share for the project.

3.2. Communications development

- buying a larger bandwidth to/from Internet;

- buying a C class of IPs and giving up those 128 existing IPs; implicated costs after this upgrade will be tolerated by IME; this C class is necessary to assure a large independence of Digital Library system provider (ISP) and the possibility to change this provider without disturbing the system, anytime economical reasons or else presumes it.

Complete extending actions of Braila County Library's MAN network and a universal diagram of the network will be created by Braila County Library.

4. Training

The necessary training courses will be provided by IME to Local Partners' librarians and also to the system administrators.

For the end users, it is not necessary to provide a dedicated training due to the fact that the system is a standard web page. The end users will be encouraged to use the new system through all the dissemination activities that will be performed by Local Partners and IME (in close cooperation with RITI Team), after the official launching.

5. Structure diagram of the digitized writings

Due to the fact that this procedure is not singular and it was identified long time ago before TinREAD digital library system has been developed, more details regarding the main operations will be presented below:

- unique identification number for each document/book/writing/newspaper, etc.; this is related to a infallible algorithm that will identify each document/book/writing/newspaper/magazine, etc. ;
- preparing a clear and simple algorithm for resources finding (it is available for the folders that contain digitized information);
- technical work characteristics setting out;
- digitized collections type;
- size (type, resolution, etc);
- procedures applied to documents (on scanning, processing - preferring the automated ones);
- productivity (depending on writing type);
- inside DL scholastic bibliography will be digitized according to MEC elaborated schedule;
- digitized information volume included in the system will be settled as a result of actions estimated above;

- it will be operated after values: one for the information volume included in RITI final project and another period of time estimation needful for including in the system the complete list of scholastic bibliography which is not under the copyright influence.

6. Copyright

In the system, only writings that have the copyright problem completely solved will be included These writings will be:

- monographs (books) that are no more under patrimonial royalties influence (being known that non patrimonial rights of being recognized as the writer do not expires and they also cannot be transferred);
- periodical magazines (newspapers, magazines) which are no longer under patrimonial royalties influence;
- others that will be based on different collaboration agreements with Braila County Library; these agreements will be signed with local press editor's majority; they will agree with this idea taking into consideration the fact that there will be a DL publishing delay of information. In this way the local press editors will benefit of free of charge publicity (advertising) to their publications. Using the local biography service, their own publications will be structured on rubrics, subjects, local personalities, institutions, etc.)

7. System exploitation

Digital library system is a complex ensemble, an information publishing channel that can be compared with a publishing house – typography – broadcast network – final client series type. Such a system goes more beyond the traditional cadre of a traditional library functioning. The services provided to the public can be income generators and the digital library system will be designed for this.

According to the overall discussions, more resources and methods/solutions have been identified in order for the system to be commercially exploited.

7.1. Resources

The resources of the system are: the bibliographical information (organized in relational databases, etc.) and the whole content of described writings. The bibliographical information access (local or NCC) will be provided free of charge to users/readers. Consequently, all the complete descriptions/content will be commercially exploited.

This will be done using some established operations and information measure units, as follows:

Operations:

- viewing
- printing
- saving in folders, etc.

Measure units:

- text page
- kilobyte
- time (as long as the resources access is permitted)

A certain information volume will be possible using certain operations. Developing a flexible configuration of informational "products" is recommended; in this way a variety of financial possibilities will be covered.

7.2. Methods

Many methods can be used for getting the informational products available in the Digital Library:

Prepaid cards

- each user has to have an unique code (free of charge); authentication and identification data are available in this account (not necessary the real person's authentication);
- user acquires a card from the library with a given number of units; with this card (based on the card code) he/she can supplement his account; in this way he/she will have the possibility to access informational products according to the available units from his/her account;
- prepaid cards can be found in a national network (within each library of the system) or in the district libraries or bookstores.

Banking cards

- DL system will be developed to identify the product and the effective payment through the agency (online operator)
- in "Credit_Card.doc" attached document there are counted more operators;
- for transaction processing a client module is included in DL system for electronic payment system or the payment will be done transferring the control to an external server;
- this method is preferred because it allows the library to run in this online environment in accordance with its own functioning statutes; so loans and any other services are available for readers being physically away and without a library registration license; financial control of returned publications is possible by extracting taxes and penalties from the card account that has been used for the transaction processing.

8. Implications

In case of library resources exploited at distance, the library's performance indicators will be redefined. Distance loaning activity (card based, to a person that is not a library reader) should be reflected in order to have a clear image of library's activity.

The online consulting of publications (except the publications consulted within Local Partners' reading hall) has also to be counted as an "inside of the library" activity.

The above mentioned aspects represent few examples. A research of the libraries' activity is necessary to be done in order to evaluate the efficiency and implication of the Digital Library in the education process.

B) DL staging

1. *Minimal functionality*

Minimal functionality of the system is the one described above exclusively the commercial exploiting component of the system. Because low detailed procedures it is not possible to deliver the system in actual terms with none of the mentioned paying components.

2. *Extended functionality*

The whole system design will take into consideration the resources assigning procedures for users. This will depend on the access level (authority level and the corresponding authentication) and allocated resources volume (payable) for users.

The allocated resources and payments will be done experimentally for the beginning by emitting prepaid cards that will assure the access to a certain number of text pages (viewing and printing).

The system will be projected so as to allow the managing of online transactions with a bank card through an online payments operator. There'll be a carrying out services agreement/commission contracted with this operator. The digital library system will manage the products that will be electronically bought and when the effective paying procedure will be started, all the information will be safely sent to the online payments operator for transaction processing. Possible penalties will be also collected based on the same procedure.

Indexing diagram

All the above mentioned lines are rely on idea that every single item has an identifier which defines and makes that item unique. In this particular case, when these items are older bibliographical publications, and these items are stored and organized in a library structure/system, this unique identifier can be **the inventory number** or/and **the fingerprint** (STAS 12629/4-88 : **Fingerprint =** the group of characters extracted from publications text (in standard conventional conditions) to answer the purpose of unique identification of publication.)

The items are in two forms: *classical materials* (prints) and *magnetic support* (scanned images). The scanned images exist, also, in two forms: the "high quality" form accessible on site for the specialists and the "medium quality" form accessible, via Web, for the public.

The necessary activities for a good indexing can be possible in three different departments: *Cataloguing, Indexing and Scanning.*

Cataloguing department

This department will create bibliographical records, from librarians' point of view, based on International Standard Bibliographical Description (standard ISBD (A) definition). These records will be handled by a library system (TinLib) that will create internal database indexes and will respond to all of the requests related to searches, browsing, etc.

In these records there will be only one field that will contain (besides the other bibliographical elements) the unique identifier information, item shelf reference, the archived item shelf reference and the indexing xml file attached to record.

Indexing department

This department will make the links between Bibliographical Catalogue and the material support (and location of this, if we assume the fact that these materials well be stored by type of material).
Here will be created the xml files that will contain the structure of archived (scanned) publication, the names and the locations of "medium quality" images and the shelf references of the materials that will contain the "high quality" images.
These files will have the name of the item identifier.

Scanning department

In this department, the items will be scanned, page-by-page and the files resulted will be stored on magnetic support (CD, DVD, etc). Each DVD will have a shelf reference (the mentioned "archived item shelf reference"). This shelf reference will consist in three areas:

- type of support area (CD, DVD, etc.);
- the identifier;
- the number of part

e.g. DVD/872682/001.

Arguments

In that way we have a full redundancy indexing system. If one librarian from one of those three departments makes a mistake and fills one wrong information in (e.g. in the bibliographical record assign an incorrect identifier) then we can correct this following the links to the xml file that contain the right information.
In one magnetic material will be stored files ("full quality" images) that will be linked to one and only one xml file (and "in extenso" one bibliographical record)(however one xml file can refer more magnetic supports), even that fact will lead to a space-loss. What are the reasons to follow this way? Is this waste space less important than other goals? In order to achieve a good indexing of information, the answer is YES! If will have two (or more!) bibliographical records that refers two xml files and these files refers one single magnetic support, we will have a 50% disseminated information. We will have with 50% more virtual human mistakes in introduction process and/or control process. If we assume as a basis price of one blank DVD 3.5 USD and the percentage of 50% waste space, the estimated loss will be about 3500 USD. This is a small price paid for a solid index.

7.1.3 Evidence collection

As a part of Salaj County Library project, the evidence activities and automated processing of stock will be developed. These activities are presented as follows:

7.1.3.1 Labeling

The whole stock available in the library will be labeled with bar code labels. Thus, on each publication, a label will be glued which represents the inventory number. It will be started the labeling of the reading halls that has the total stock described in the databases of the TinLIB integrated librarian system.

The labels will be generated with the software produced by IME Romania (Barcode Generator - BG). Each inventory number generated (printed on a label) will be stocked by BG in a TinLIB database size (base that reflects the real situation of stock = "reality base" = RB). This software will be adjusted for executing the described functionality (its development will be considered as cost share). The printing will be done with a special printer (thermal transfer – it doesn't use any kind of ink, only the label) that allows label-by-label printing.

7.1.3.2 Inventorying

The generation of the BR database means the gathering of the information necessary for inventorying. At the labeling operation, the end of database that reflects the real situation of the stock (the one in BR) will be compared to the one it was described in the online database (TinLIB – BT base). Comparing the two databases (BR and BT), we'll get three lists.

Conformity

The units that we'll be found both on BR and BT will be marked as it is in the official report of inventory as being checked and existing on the shelves.

Units missing

The units existing in BT and that don't exist in BR will be mentioned in a list attached to RMF going out and will be "decreased" so that the online system and the inventory reports to reflect the real situation.

No description units

The units existing in BR and that don't exist in BT will be described in the TinLIB for completely providing the publications stock retrospective.

Retro-conversion

The operation described means from functional point of view the operating of stock retro converting or more precisely the final checking of this operation.

Loaning automation

Another direct consequence of labeling operation is the possibility to develop automatically current operations (loaning/downloading).

As a result of labeling activities the publications stock will be integrally equipped at every copy level with bare code labels. There will also be emitted plastic laminated licenses (long life lasting) for readers. On each license will be written the reader's associated number as it is wrote in TinLIB. Thus loaning and downloading operations will be spread out automatically by using the bar code readers.

Direct impact of labor productivity and quality services offered to public (less waiting time) is obviously.

7.1.4 Services upgrade (Extension)

An activity synchronized with all the efforts of public provided services is represented by equipping the library with a network printer that can spread over a huge volume of printed pages in the unities of time. Using this equipment, the librarians (readers) will be able to print (on traditional support) bibliographies or final results of the national or local databases searched (by client type access to NCC) or integral content of writings (accessing the Digital Library).

So this service will allow the offline information exploiting available in the system.

7.2 Major Study Investigations

In order to start the project, several studies and investigations were performed for Braila & Salaj County Libraries (including Simleu and Jibou local libraries) and National Library of Romania, as follows:

- resource analysis;
- general IT analysis;
- training & consultancy requirements analysis;
- project monitoring & evaluation analysis.

7.2.1 Site Survey - Brăila County Library

7.2.1.1 Existent

a) Hardware

Servers

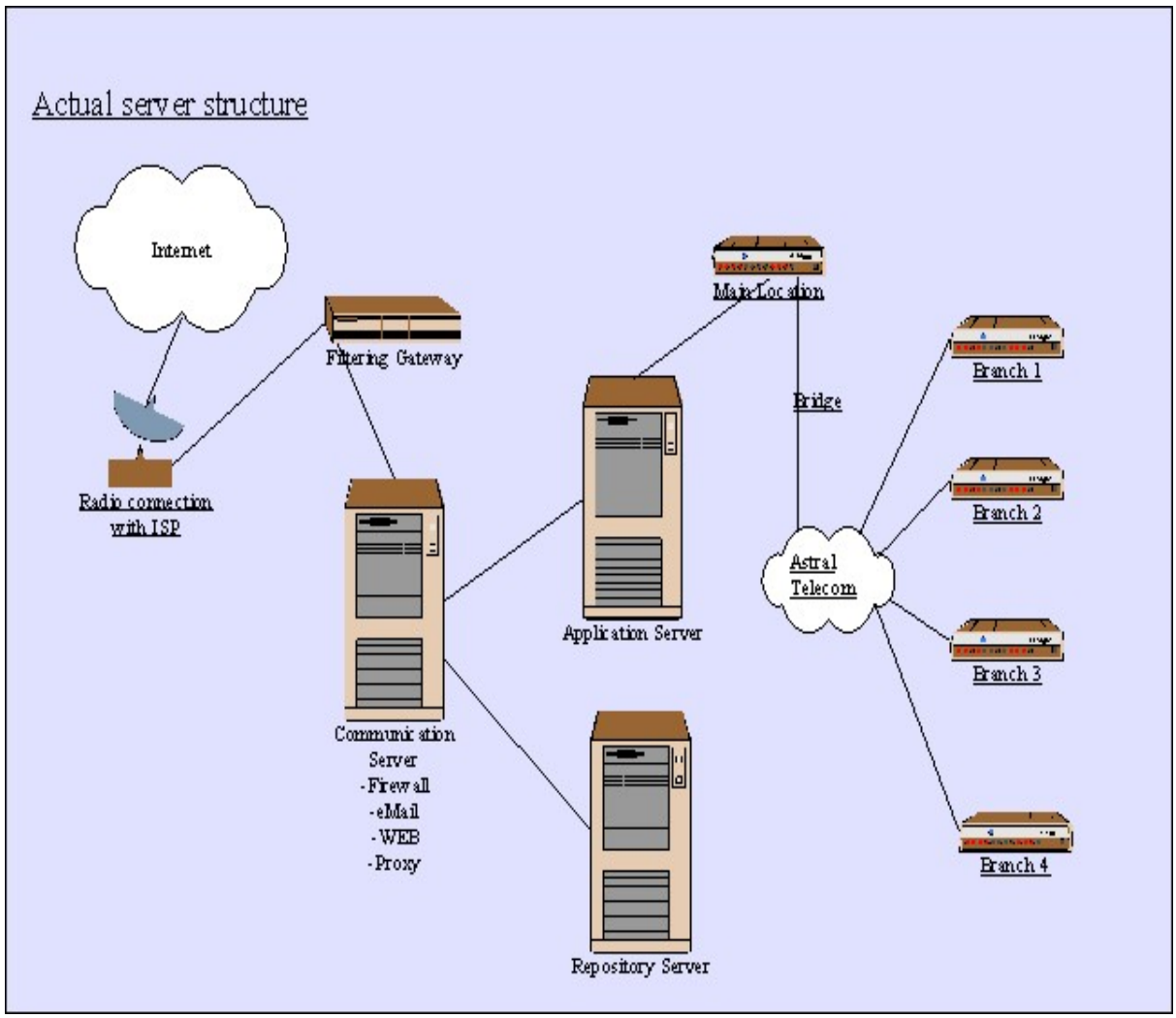
At present, the servers' structure is:

Communication server - it is used to provide Internet connection and web services for the entire MAN library. IBM Netfinity 3000
Gateway - connects the library networks with ISP server structure. IBM GL 300
Application server - it is used for the TinLIB v400, client-server version, integrated library software, and for connecting library branches. Netfinity 5000 (dual processor, hot swap HDD enabled and hardware RAID level 1 card)
Repository server - stores data collected from different compartments and also from LEX Expert application that can be used at the library's reading room. Netfinity 5000 (dual processor and hot swap enabled.

Network

The library network in this moment is consisted from a Metropolitan Area Network, configured from a main location and 4 branches. The communication between the above mentioned locations is made using a CATV solution provided by the Braila Astral Telecom S.A. company, using 128 kbps bandwidth. Three local library branches are consisted by simple Local Area Networks formed by two or three computers connected to main location using a gateway and a CATV bridge. One of

the branches integrates two Local Area Networks located in nearby buildings. The entire amount of workstations connected at present within the library MAN is 90.



Peripherals

The Braila County Library has different type of peripherals for sustaining the current activities. 9 printers are used within the library: 6 laser printers (one of them is a network printer and three of them have a duplex unit), 2 ink-jet printers and a dot matrix one.

Communication devices

The Braila "Panait Istrati" County Public Library had different communication stages, starting with leased lines provided by fixed telephony national provider ROMTELECOM S.A. and ended with a modern leased line using a 2.4 GHz radio connection in its Internet connection to ISP. The Braila County Library has at present 6 dial-up/leased-line external modems and 2 pairs of PATTON special 128 kbs using two pairs copper wire leased-line. All these devices are prepared for a new service for dial-up information service. For this project the communication server is upgraded with an extension card having 8 serial connectors.

MAN functionality is supported by 6 gateways and also 5 CISCO UBR 924 CATV routers.
Also the connection with the ISP is made using a Lucent WAVELAN radio modem, operating on 2.4 GHz radio frequency.

b) Software

The "Panait Istrati" Braila County Library is using a wide range of software applications from operating system and general usage ones to special applications.

Operating systems
Server operating systems
- Microsoft Windows 2000 Server (Repository server);
- RedHat Linux 7.0 (Application server);
- Mandrake Linux 9.1 (Communication server);
- Mandrake Linux 9.1 (Internet Gateway);
- RedHat Linux 6.0 (Branch Gateways);

Workstations operating systems
- Librarians – Windows 98 SE and OpenDOS Caldera 7.0;
- Programmers – Windows 98 SE and Linux RedHat and Mandrake distributions;
- On Line Public Access Catalogues (OPAC) – OpenDOS Caldera 7.0 and for the workstation with Internet access, Windows 95 and Windows 98 SE.

Security system
Server – Packet filtering using IPTables;
Workstation – AVG Free edition antivirus application.

Internet Services
Server:
- http server Apache (compiled with Perl and PHP);
- databases MySQL;
- eMail server Postfix and SquirrelMail;
- Proxy server Squid.

Client:
eMail – MS Outlook Express;
http – MS Internet Explorer, Netscape;
ftp – MS Internet Explorer, Netscape.

Office suites
- Open Office 1.0.1;
- 602Text;
- MS Office 2000 – Small business.

Specialized library applications
Server:
TinLIB v.400 with the following modules:
- cataloguing;
- serials control;
- multimedia;

- administration;
- reports.

Client:

- Librarian version (text and graphical versions);
- OPAC versions (text version).

Specialized cultural events calendar (database web controlled)

Specialized applications

LEX Expert – law database used as a special service at reading room, a file server application.

Applications for image editing and conversion:

- Adobe Photoshop LE;
- Web design;
- Macromedia Dreamweaver 3.0;
- Macromedia Freehand 9;
- Macromedia Flash 4.0;
- Quanta.

c) Communications

There are two major components: *connections* through branches insight the MAN and *Internet connection*, as follows:

MAN communications:

The speed between the branches is a guaranteed 128 kbps CATV line provided by ASTRAL TELECOM S.A.

Could be necessary in the future to double the speed in case of a single branch, with a number of 20 PC's connected in the LAN.

Internet connection:

At present the Internet connection is provided by PCNet DataNetworks S.R.L.; this connection is 192 kbps and is not guaranteed.

It is also necessary a second Internet connection to one of the library branch, also to diminish the Internet traffic between the branch and the library main location, and preserve the band for WAN traffic and also to have a back-up connection.

d) Personnel

The Braila "Panait Istrati" County Library, has 72 employees, 54 out of 72 are librarians - including 4 programmers and 2 computer operators. The rest of employees represents the administrative personnel.

All personnel categories have appropriate studies in order to fulfill and sustain their jobs curricula.

In the "Library Informatics System" can be included the above mentioned personnel categories:

- programmers
- librarians specialized in cataloguing
- bibliographers

Both programmers and bibliographers have highly developed skills in data management.

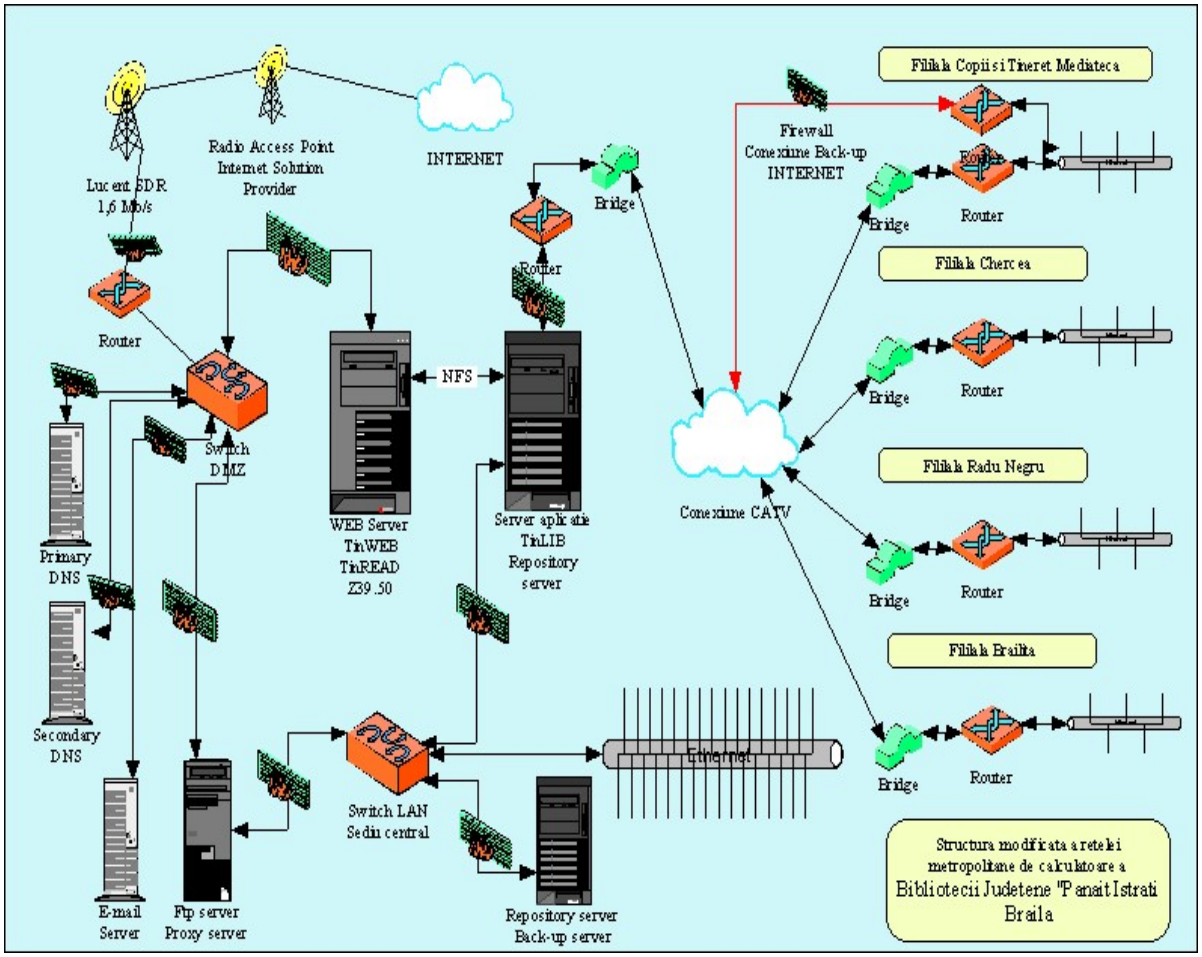
7.2.1.2. System requirements in order to be able to operate properly

a) Hardware

i) One Server for running TinRead and TinWeb applications. This server must be a powerful-processor server and must assure a good sped of transferring data (internal: read/write on internal HDD and external: network communication)

ii) In order to have a complete inter-connectivity between these servers, it is necessary to assure the same technological level.

iii) Storage devices are also required for storing the digitized information and back-up operations.



b) Software

- UNIX Operating system;
- Internet services (http server, https, email, ftp, ssh, etc);
- Security system (firewall);
- Dedicated applications (php, java, c, gcc, mysql, sablotron, mnogosearch);
- Web applications that will ensure the on-line interrogation of the library database system and the following desiderates:
  - browsing the data;
  - authorities files (validation lists);
  - simple search (search for one filed only);
  - advanced search (combined search for many fields combined with Boolean operators);
  - multicasting appeals;
  - select/de-select results;
  - emailing, printing and export these results;

This application will respect the international standards (ISBD, Unicode, UNIMARC, Z39.50, TCP/IP etc).

c) Communications

A proper communication speed between the end-users (on-line customers) and the applications servers will be provided. This goal means a good access from MAN, RONIX and WAN.

d) Personnel

The maintenance of the system requires a qualified person in order to set up and administrate the system. Also the personnel who will assist the customers in using the system must be trained.
The user manuals will be prepared by IME IT representatives and they will be handed over to the librarians and also to the system administrators.

7.2.1.3 Necessary to achieve the goals

a) Hardware

i) One applications server.

Server INTEL dual XEON 2.66GHz

- Mainboard : Intel ClearWater 533 Server Board, FSB 533, 2-way Xeon, SE7501CW2;
- Case : Intel Hudson III, BASE, with redundant source, WinterPark/Bryson/Vera Beach/Harlingen;
- Processor : 2 x Xeon 2667Mhz, FSB 533, 512kb Cache, WestVille, Bryson, Vera Beach, Harlingen;
- RAM : 1Gb RAM;
- HDD : 2*120Gb, 7200rpm IDE for COOSBAY ATA, Adkins, ClearWater,

Woodruff;
- LAN : 2 x Intel 10/100/1000TX Server NIC integrate on-board;
- Included: CD-ROM, FDD, KB, Mouse.

ii) Upgrade for the existing three servers: ***Communication server***, ***Gateway and Application server***.

- **Adapter for change ATA 100 to ATA133 (3 pieces)**: High Point Rocket 133, Single channel PCI host adapter
ATA 133 HDD's;
- **HDD (3 pieces)**: 120GB MAXTOR Diamond Max Plus 9, ATA 133, 7200 rpm, 8 MB cache;
- **CD-RW (one piece):** Plextor PlexWriter 52.24.52A, black, buffer underrun protection E-IDE (ATAPI) Interface, Retail Box.

b) Software

- Unix operating system;
- Apache Web Server;
- SSH Server;
- Firewall (iptables);
- FTP Server;
- Mail Server;
- PHP module compiled with the following libraries: tinlib, mysql, xml, xslt, sablot, sockets, mnogosearch;
- MySQL Server;
- Sablotron package;
- Mnogosearch application;
- XML, XSLT libraries;
- Catdoc application;
- XPDF application;
- GCC compiler;
- TinLIB Z39.50 Server;
- TinWEB application;
- TinREAD application;
- Tinlib software upgrades.

c) Communications

The Internet subscription for one year period of time will create the opportunity for the final users to access the bibliographical descriptions and digitized information.

d) Personnel

The maintenance of the system requires a qualified person in order to co figurate and administrate the system. The designated person has to be trained by IME Romania. The user manuals will be prepared by IME IT representatives and they will be handed over to librarians and to system administrators.

For the end users, it is not necessary to provide a dedicated training due to the fact that the system is a standard web page. The end users will be encouraged to use the

new system through all the dissemination activities that will be performed by Local Partners and IME (in close cooperation with RITI Team), after the official launching.

7.2.2 Site Survey - Sălaj County Library

7.2.2.1. Existent

a) Hardware

Servers

The servers' structure is presented as follows:

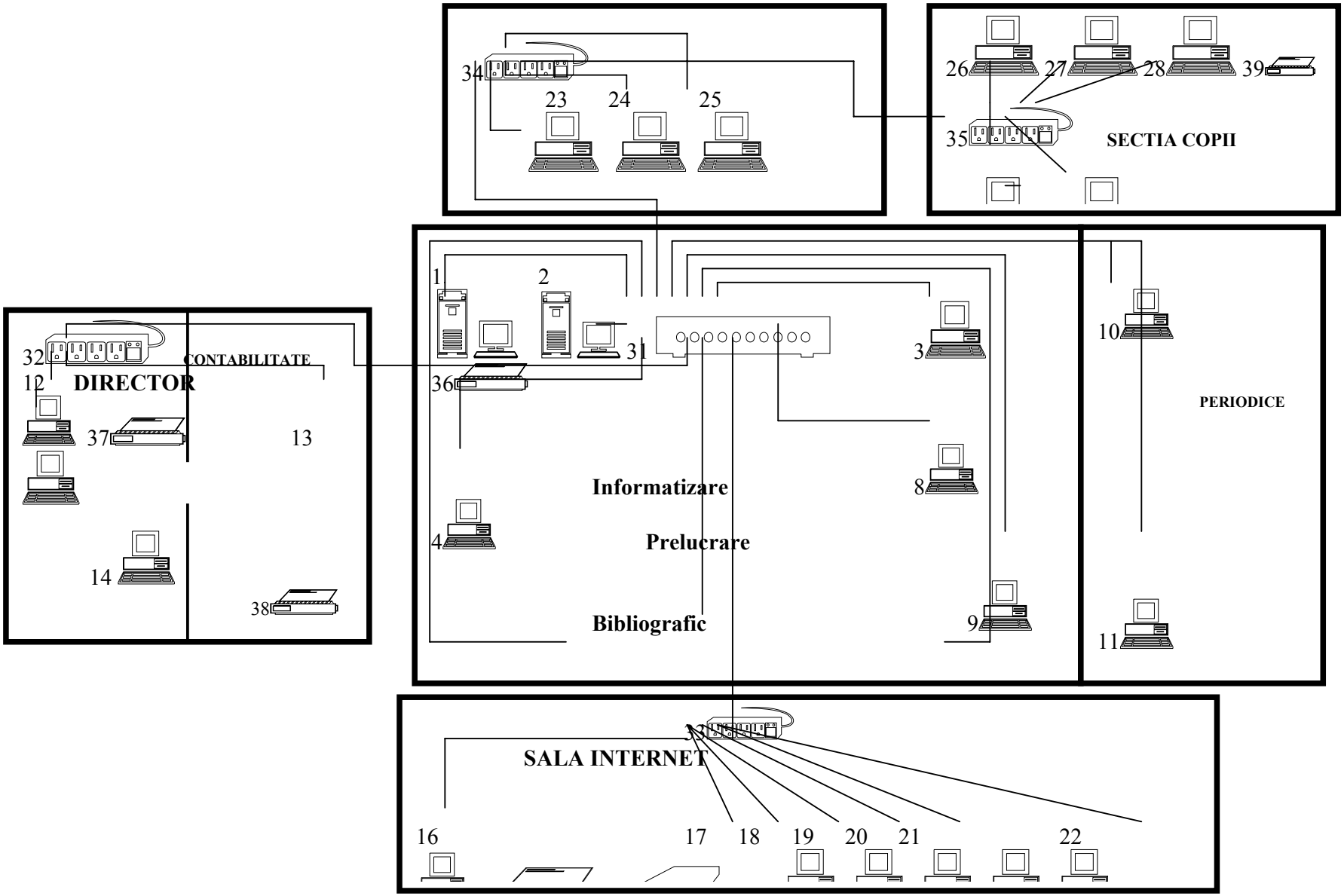
Communication server - it is used to provide Internet connection and web services for the entire library;
Application server - it is used for the TinLIB v400, client-server version, integrated library software and for connecting library branches.

Network

At present the library network is consisted from Local Area Network. The entire amount of workstations connected in this moment at the library LAN is 27. The connection is assured by one switch and 4 HUB-s.

Peripherals

The Salaj County Library has different type of peripherals for sustaining the current activities. 4 printers are used within the library as follows: 2 laser printers, one ink-jet printer and a dot matrix one.


34
23
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SECTIA COPII
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2
31
3
10
PERIODICE
32
CONTABILITATE
12
DIRECTOR
36
37
13
Informatizare
8
4
Prelucrare
14
38
Bibliografic
9
11
33
SALA INTERNET
16
17
18
19
20
21
22

b) Software

The Salaj County Library is using a wide range of software applications from operating system and general usage ones to special applications.

Operating systems
Server operating systems
- RedHat Linux 9.0 (Application server);
- RedHat Linux 9.0 (Communications server);

Workstations operating systems
- Librarians – Windows 98 SE and Windows 95;
- Programmers – Windows 98 SE;
- On Line Public Access Catalogues (OPAC) – Windows 95 and Windows 98 SE.

Security system
Server – Packet filtering using IPTables;
Workstation – AVG Free edition antivirus application.

Internet Services
Server:
- http server Apache (compiled with Perl and PHP);
- email server Postfix and SquirrelMail;
- proxy server Squid.

Client:
- email – MS Outlook Express;
- http – MS Internet Explorer, Netscape;
- ftp – MS Internet Explorer, Netscape.

Office suites
MS Office 2000 – Small business

Specialized library applications
Server:
TinLIB v.400 with the following modules:
- Cataloguing;
- Circulation;
- Multimedia;
- Administration;
- Reports.

Client:
- Librarian version (text and graphical versions);
- OPAC versions (text version).

Specialized applications
LEX Expert – law database used as a special service at reading room, a file server application.

c) Communications

Internet connection:
Now the Internet connection is provided by Astral Telecom. This connection is 128 Kbps and is not guaranteed.

d) Personnel

The Salaj County Public Library has a number of 30 employees, 25 out of 30 are librarians - including one programmer and one computer operator. All categories of personnel have appropriate studies to fulfill and sustain their jobs curricula.
The above mentioned categories of personnel can be used for the implementation of our project:

- Programmers
- Librarians specialized in cataloguing
- Bibliographers

7.2.2.2. System requirements in order to be able to operate properly

a) Hardware

i) One Server for running TinRead and TinWeb applications. This server must be a powerful-processor server and must assure a good speed of transferring data (internal: read/write on internal HDD and external: network communication);
ii) Storage devices are also required for storing the digitized information and back-up operations.

b) Software:

1. UNIX Operating system;
2. Internet services (http server, https, email, ftp, ssh, etc);
3. Security system (firewall);
4. Dedicated applications (php, java, c, gcc, mysql, sablotron, mnogosearch);
5. Web applications that will ensure the on-line interrogation of the library database system and the following desiderates:
   - browsing the data;
   - authorities files (validation lists);
   - simple search (search for one filed only);
   - advanced search (combined search for many fields combined with Boolean operators);
   - multicasting appeals;
   - select/de - select results;
   - emailing, printing and export these results.

   This application will respect the international standards (ISBD, Unicode, UNIMARC, Z39.50, TCP/IP etc).

c) Communications

It is necessary to assure a good communication speed between the end-users (on-line customers) and the applications servers. This goal means a good access from MAN, RONIX and WAN.

d) Personnel

IME will provide the proper training courses to all the librarians who will use the system and also to the system administrator.
The user manuals will be prepared by IME IT representatives and they will be handed over to librarians and to system administrators.

7.2.2.3. Necessary to achieve the goals

a) Hardware

Upgrade for the existing **HDD (2 pieces)** : 120GB MAXTOR Diamond Max Plus 9, ATA 133, 7200 rpm, 8 MB cache

b) Software

1. Unix operating system;
2. Apache Web Server;
3. SSH Server;
4. Firewall (iptables);
5. FTP Server;
6. Mail Server;
7. PHP module compiled with the following libraries: tinlib, mysql, xml, xslt, sablot, sockets, mnogosearch;
8. MySQL Server;
9. Sablotron package;
10. Mnogosearch application;
11. XML, XSLT libraries;
12. Catdoc application;
13. XPDF application;
14. GCC compiler;
15. TinLIB Z39.50 Server;
16. TinWEB application;
17. TinREAD application;
18. Tinlib software upgrades.

c) Communications

The Internet subscription for one year period of time with 128kbps guaranteed will create the opportunity for the final users to access the bibliographical descriptions and digitized information.

d) Personnel

The maintenance of the system requires a qualified person in order to administrate the system. The designated person has to be trained by IME Romania.
The user manuals will be prepared by IME IT representatives and they will be handed over to librarians and to system administrators.

For the end users, it is not necessary to provide a dedicated training due to the fact that the system is a standard web page. The end users will be encouraged to use the new system through all the dissemination activities that will be performed by Local Partners and IME (in close cooperation with RITI Team), after the official launching.

7.2.3. Site Survey - National Library of Romania

7.2.3.1. Existent

a) Hardware

Servers

At present the servers' structure is:

Web server - it is used to provide Internet connection and web services for the entire NLR;
Application server - it is used for the TinLIB v400, client-server version and integrated library software and for connecting library branches;
Security server - it is used to protect the local area network (firewall);
Communication server – it is used to provide samba service;
Application server - it is used to provide access to LEX application;
Web server - it will be used for TinWeb and TinRead applications.

Network

The library network in this moment is consisted from Local Area Network. The entire amount of workstations connected at the LAN library is 147. The connection is assured by 14 switches and 7 HUB-s.

Peripherals

The National Library of Romania has different type of peripherals for sustaining the current activities. 40 printers are used within the NLR as follows: 30 laser printers, 6 ink-jet printers and 4 dot matrix printers.

b) Software

The National Library of Romania is using a wide range of software applications from operating system and general usage ones to special applications.

Operating systems
Server operating systems
- RedHat Linux 7.2 (Application server);
- Suse Linux 6.0 (Communications, Web, Samba servers);

Workstations operating systems
- Librarians – Windows 98 SE and Windows 95;
- Programmers – Windows 98 SE;
- On Line Public Access Catalogues (OPAC) – Windows 95 and Windows 98 SE.

Security system

Server – Packet filtering using IPTables;
Workstation – F-Secure antivirus application.

Internet Services

Server:
- http server Apache (compiled with Perl and PHP);
- eMail server Postfix and SquirrelMail;
- proxy server Squid.

Client:
- email – MS Outlook Express
- http – MS Internet Explorer, Netscape
- ftp – MS Internet Explorer, Netscape

Office suites

MS Office 2000 – Small business.

Specialized library applications

Server:

TinLIB v.400 with the following modules:

- Cataloguing;
- Circulation;
- Acquisition;
- Serial control;
- Multimedia;
- Administration;
- Reports.

Client:

- Librarian version (text and graphical versions);
- OPAC versions (text version).

Specialized applications

LEX Expert – law database used as a special service at reading room, a file server application.

c) Communications

Internet connection:

At present the Internet connection is provided by ICI. This connection is 128 kbps and is not guaranteed.

d) Personnel

The National Library of Romania has 302 employees, 204 out of 302 are librarians - including 4 programmers and 2 computer operators.

The all categories of personnel have appropriate studies to fulfill and sustain their jobs curricula.

The above mentioned categories of personnel can be used for the implementation of our project:

- programmers
- librarians specialized in cataloguing
- bibliographers

7.2.3.2. System requirements in order to be able to operate properly

a) Hardware

One Server for running TinRead and TinWeb applications. This server must be a powerful-processor server and must assure a good speed of transferring data (internal: read/write on internal HDD and external: network communication)

b) Software

1. UNIX operating system;
2. Internet services (http server, https, email, ftp, ssh, etc);
3. Security system (firewall);
4. Dedicated applications (php, java, c, gcc, mysql, sablotron, mnogosearch);
5. Web applications which will ensure the on-line interrogation of the library database system and the following desiderates:
   - browsing the data;
   - authorities files (validation lists);
   - simple search (search for one filed only);
   - advanced search (combined search for many fields combined with Boolean operators);
   - multicasting appeals;
   - select/de-select results;
   - emailing, printing and export these results.

This application will respect the international standards (ISBD, Unicode, UNIMARC, Z39.50, TCP/IP etc).

c) Communications

It is necessary to assure a good communication speed between the end-users (on-line customers) and the applications servers. This goal means a good access from MAN, RONIX and WAN.

d) Personnel

The maintenance of the system requires a qualified person in order to administrate the system. The designated person has to be trained by IME Romania.
The user manuals will be prepared by IME IT representatives and they will be handed over to librarians and to system administrators.

7.2.3.3. Necessary to achieve the goals

a) Hardware

i) Upgrade for the existing server.
Mainboard: Intel ClearWater Server Board, FSB 533, 2-way Xeon, SE7500CW2ATA.
Processor: 2 x Intel Pentium4 2800 MHz, FSB 533, 512kb Cache.
RAM: 2x512 Mb Apacer DDRAM PC2700.

b) Software

1. Unix operating system;
2. Apache Web Server;
3. SSH Server;
4. Firewall (iptables);
5. FTP Server;
6. Mail Server;
7. PHP module compiled with the following libraries: tinlib, mysql, xml, xslt, sablot, sockets, mnogosearch;
8. MySQL Server;
9. Sablotron package;
10. Mnogosearch application;
11. XML, XSLT libraries;
12. Catdoc application;
13. XPDF application;
14. GCC compiler;
15. TinLIB Z39.50 Server;
16. TinWEB application;
17. TinREAD application;
18. Tinlib software upgrades.

c) Communications

The final users can access the bibliographical descriptions and digitized information using the actual NLR Internet connection.

d) Personnel

The maintenance of the system requires a qualified person in order to administrate the system. The designated person has to be trained by IME Romania.
The user manuals will be prepared by IME IT representatives and they will be handed over to librarians and to system administrators.

For the end users, it is not necessary to provide a dedicated training due to the fact that the system is a standard web page. The end users will be encouraged to use the new system through all the dissemination activities that will be performed by Local Partners and IME (in close cooperation with RITI Team), after the official launching.

7.3 Communication Plan

In order to provide transparency during the project implementation, the following reports must be released and distributed, periodically and upon completion of major events.

List of reports:

Communication Item	RITI-Access Project Director	RITI Project Manager	RITI - Access Team	Project Field Manager	Subcontractor Project Manager	Frequency	How to distribute
Project status reports	N	N,R, A	I	C,I	C,I	Monthly	E-mail, fax
Meeting minutes	N	R,A	I	I	C,I	After each meeting	E-mail, fax
Changes to project plan	A	R,A	I	I	R, A	Whenever needed	E-mail, fax
Review of major WBS sections	A	R,A	I	I	R,A	After each WBS section review	E-mail, fax
Work Package completion	A	N,R,A	I	C,I	N, R, A	When package is completed	E-mail, fax
Deliverables	A	R,A	I	C,I	N, R, A	Throughout project	E-mail, fax

Legend

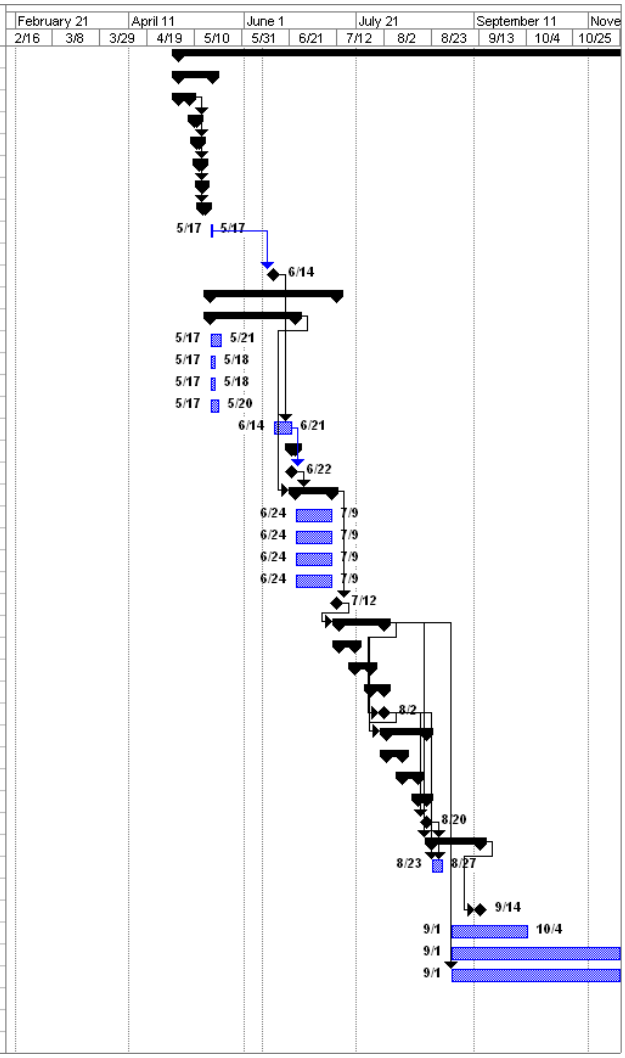
A - Approves the deliverable
R - Reviews the deliverable (and provide feedback)
C - Creates the deliverables
I - Provides input
N - Is notified when a deliverable is complete
M- Manage the deliverable

8. Work Breakdown Structure (Schedule)

8.1 List of project tasks and their estimated duration in working days

ID	Task Name	Duration	Start	Finish
1	**Library informatics system**	**348 days**	**Mon 5/3/04**	**Wed 8/31/05**
2	**Data analysis**	**11 days**	**Mon 5/3/04**	**Mon 5/17/04**
3	**Data collecting**	**5 days**	**Mon 5/3/04**	**Fri 5/7/04**
4	Site survey Braila County Library	2 days	Mon 5/3/04	Tue 5/4/04
5	Site survey Salaj County Library	2 days	Wed 5/5/04	Thu 5/6/04
6	Site survey National Library of Romania	1 day	Fri 5/7/04	Fri 5/7/04
7	**N.C.C. component evaluation**	**1 day**	**Mon 5/10/04**	**Mon 5/10/04**
8	Hardware	1 day	Mon 5/10/04	Mon 5/10/04
9	Software	1 day	Mon 5/10/04	Mon 5/10/04
10	Communications	1 day	Mon 5/10/04	Mon 5/10/04
11	Personnel	1 day	Mon 5/10/04	Mon 5/10/04
12	**Digital Library component evaluation**	**1 day**	**Tue 5/11/04**	**Tue 5/11/04**
13	Hardware	1 day	Tue 5/11/04	Tue 5/11/04
14	Software	1 day	Tue 5/11/04	Tue 5/11/04
15	Communications	1 day	Tue 5/11/04	Tue 5/11/04
16	Personnel	1 day	Tue 5/11/04	Tue 5/11/04
17	**Evidence collection evaluation (Salaj)**	**1 day**	**Wed 5/12/04**	**Wed 5/12/04**
18	Hardware	1 day	Wed 5/12/04	Wed 5/12/04
19	Software	1 day	Wed 5/12/04	Wed 5/12/04
20	Communications	1 day	Wed 5/12/04	Wed 5/12/04
21	Personnel	1 day	Wed 5/12/04	Wed 5/12/04
22	**Extended services evaluation(Salaj)**	**1 day**	**Thu 5/13/04**	**Thu 5/13/04**
23	Hardware	1 day	Thu 5/13/04	Thu 5/13/04
24	Software	1 day	Thu 5/13/04	Thu 5/13/04
25	Communications	1 day	Thu 5/13/04	Thu 5/13/04
26	Personnel	1 day	Thu 5/13/04	Thu 5/13/04
27	**Systems dimensioning**	**1 day**	**Fri 5/14/04**	**Fri 5/14/04**
28	Braila C. L.	1 day	Fri 5/14/04	Fri 5/14/04
29	Salaj C. L.	1 day	Fri 5/14/04	Fri 5/14/04
30	N. L. R.	1 day	Fri 5/14/04	Fri 5/14/04
31	Final analysis	1 day	Mon 5/17/04	Mon 5/17/04
32	Submission of the PMP	0 days	Wed 6/2/04	Wed 6/2/04
33	Approval of the PMP	0 days	Mon 6/14/04	Mon 6/14/04
34	**Acquisition process**	**40 days**	**Mon 5/17/04**	**Mon 7/12/04**
35	**Procurement phase**	**28 days**	**Mon 5/17/04**	**Wed 6/23/04**
36	Hardware procurement documentation	5 days	Mon 5/17/04	Fri 5/21/04
37	Basic software procurement documentation	2 days	Mon 5/17/04	Tue 5/18/04
38	Software application procurement documentation	2 days	Mon 5/17/04	Tue 5/18/04
39	Communication services procurement documentation	4 days	Mon 5/17/04	Thu 5/20/04
40	Request for offer to potential vendors	6 days	Mon 6/14/04	Mon 6/21/04
41	**Offer analysis**	**2 days**	**Tue 6/22/04**	**Wed 6/23/04**
42	Offer selection completed and final rapport	2 days	Tue 6/22/04	Wed 6/23/04
43	**Acquisition phase**	**12 days**	**Thu 6/24/04**	**Fri 7/9/04**
44	Hardware acquisition	12 days	Thu 6/24/04	Fri 7/9/04
45	Basic software acquisition (Win XP)	12 days	Thu 6/24/04	Fri 7/9/04
46	Application software acquisition(Tinlib Z39.50, TinWEB, TinREAD)	12 days	Thu 6/24/04	Fri 7/9/04
47	Communication services acquisition	12 days	Thu 6/24/04	Fri 7/9/04
48	Acquisition completed and final report	0 days	Mon 7/12/04	Mon 7/12/04
49	**System implementation (development)**	**14 days**	**Tue 7/13/04**	**Mon 8/2/04**
50	**C. L. Braila**	**5 days**	**Tue 7/13/04**	**Mon 7/19/04**
51	Hardware Installation(NCC, Digital Library)	2 days	Tue 7/13/04	Wed 7/14/04
52	Software Installation(NCC, Digital Library)	2 days	Thu 7/15/04	Fri 7/16/04
53	Communication Installation(NCC, Digital Library)	1 day	Mon 7/19/04	Mon 7/19/04
54	System testing (local)	0 days	Mon 7/19/04	Mon 7/19/04
55	**C. L. Salaj**	**5 days**	**Tue 7/20/04**	**Mon 7/26/04**
56	Hardware Installation(NCC, Digital Library, Evidence Collection, Extended services)	2 days	Tue 7/20/04	Wed 7/21/04
57	Software Installation(NCC, Digital Library, Development)	2 days	Thu 7/22/04	Fri 7/23/04
58	Communication Installation(NCC, Digital Library)	1 day	Mon 7/26/04	Mon 7/26/04
59	System testing (local)	0 days	Mon 7/26/04	Mon 7/26/04
60	**National Library of Romania**	**4 days**	**Tue 7/27/04**	**Mon 8/2/04**
61	Hardware Installation(NCC, Digital Library)	2 days	Tue 7/27/04	Wed 7/28/04
62	Software Installation(NCC, Digital Library)	2 days	Thu 7/29/04	Fri 7/30/04
63	Communication facilities and services set up(NCC)	1 day	Fri 7/30/04	Fri 7/30/04
64	Coordination between databases	0 days	Mon 8/2/04	Mon 8/2/04
65	Whole System testing (local and global)	0 days	Mon 8/2/04	Mon 8/2/04
66	Alpha & beta releases. Final release	0 days	Mon 8/2/04	Mon 8/2/04
67	**Training (users and system administrators)**	**14 days**	**Tue 8/3/04**	**Fri 8/20/04**
68	**Braila C. L.**	**5 days**	**Tue 8/3/04**	**Mon 8/9/04**
69	Software	2 days	Tue 8/3/04	Wed 8/4/04
70	Communication	2 days	Thu 8/5/04	Fri 8/6/04
71	Cooperative mode training	1 day	Mon 8/9/04	Mon 8/9/04
72	**Salaj C. L.**	**5 days**	**Tue 8/10/04**	**Mon 8/16/04**
73	Hardware (Scanner)	1 day	Tue 8/10/04	Tue 8/10/04
74	Software	2 days	Wed 8/11/04	Thu 8/12/04
75	Communication	1 day	Fri 8/13/04	Fri 8/13/04
76	Cooperative mode training	1 day	Mon 8/16/04	Mon 8/16/04
77	**N. L. R.**	**4 days**	**Tue 8/17/04**	**Fri 8/20/04**
78	Software	2 days	Tue 8/17/04	Wed 8/18/04
79	Communication	1 day	Thu 8/19/04	Thu 8/19/04
80	Cooperative mode training	1 day	Fri 8/20/04	Fri 8/20/04
81	Training completion time	0 days	Fri 8/20/04	Fri 8/20/04
82	**Signing of the provisional acceptance certificate (PAC)**	**7 days**	**Mon 8/23/04**	**Tue 8/31/04**
83	Site inspection	5 days	Mon 8/23/04	Fri 8/27/04
84	Signature	0 days	Tue 8/31/04	Tue 8/31/04
85	Official launching	0 days	Tue 9/14/04	Tue 9/14/04
86	Dissemination	24 days	Wed 9/1/04	Mon 10/4/04
87	Technical support & assistance	261 days	Wed 9/1/04	Wed 8/31/05
88	Monitoring & Evaluation	228 days	Wed 9/1/04	Fri 7/15/05
89	**Final acceptance certificate**	**5 days**	**Mon 7/25/05**	**Fri 7/29/05**
90	Site inspection	5 days	Mon 7/25/05	Fri 7/29/05
91	Signature	0 days	Fri 7/29/05	Fri 7/29/05

ID	Task Name
1	**Library informatics system**
2	**Data analysis**
3	**Data collecting**
7	**N.C.C. component evaluation**
12	**Digital Library component evaluation**
17	**Evidence collection evaluation (Salaj)**
22	**Extended services evaluation(Salaj)**
27	**Systems dimensioning**
31	Final analysis
32	**Submission of the PMP**
33	Approval of the PMP
34	**Acquisition process**
35	**Procurement phase**
36	Hardware procurement documentation
37	Basic software procurement documentation
38	Software application procurement documentation
39	Communication services procurement documentation
40	Request for offer to potential vendors
41	**Offer analysis**
42	Offer selection completed and final rapport
43	**Acquisition phase**
44	Hardware acquisition
45	Basic software acquisition (Win XP)
46	Application software acquisition(Tinlib Z39.50, TinWEB, TinREAD)
47	Communication services acquisition
48	Acquisition completed and final report
49	**System implementation (development)**
50	**C. L. Braila**
55	**C. L. Salaj**
60	**National Library of Romania**
66	Alpha & beta releases. Final release
67	**Training (users and system administrators)**
68	**Braila C. L.**
72	**Salaj C. L.**
77	**N. L. R.**
81	Training completion time
82	**Signing of the provisional acceptance certificate (PAC)**
83	Site inspection
84	Signature
85	Official launching
86	Dissemination
87	Technical support & assistance
88	Monitoring & Evaluation
89	**Final acceptance certificate**
90	Site inspection
91	Signature



8.2 Resources allocation

The allocated hours presented below represent estimates and guidelines.

ID	Task Name	Work	Duration	Start	Finish	Details	Apr 26, '0 M
1	**Library informatics system**	**1,288 hrs**	**348 days**	**Mon 5/3/04**	**Wed 8/31/05**	Work	
2	**Data analysis**	**200 hrs**	**11 days**	**Mon 5/3/04**	**Mon 5/17/04**	Work	
3	**Data collecting**	**40 hrs**	**5 days**	**Mon 5/3/04**	**Fri 5/7/04**	Work	
4	Site survey Braila County Library	16 hrs	2 days	Mon 5/3/04	Tue 5/4/04	Work	
	Marian Arapu: Technical manager	*8 hrs*		*Tue 5/4/04*	*Tue 5/4/04*	Work	
	Dragos Neagu: Deputy Director / BCL Representative	*8 hrs*		*Mon 5/3/04*	*Tue 5/4/04*	Work	
5	Site survey Salaj County Library	16 hrs	2 days	Wed 5/5/04	Thu 5/6/04	Work	
	Marian Arapu: Technical manager	*8 hrs*		*Thu 5/6/04*	*Thu 5/6/04*	Work	
	Maria Carpineanu: President of Zalau „Library Friends" NGO / Project Res	*8 hrs*		*Wed 5/5/04*	*Thu 5/6/04*	Work	
6	Site survey National Library of Romania	8 hrs	1 day	Fri 5/7/04	Fri 5/7/04	Work	
	Marian Arapu: Technical manager	*4 hrs*		*Fri 5/7/04*	*Fri 5/7/04*	Work	
	Luminita Gruia: National Library of Romania Representative	*4 hrs*		*Fri 5/7/04*	*Fri 5/7/04*	Work	
7	**II.C.C. component evaluation**	**32 hrs**	**1 day**	**Mon 5/10/04**	**Mon 5/10/04**	Work	
8	Hardware	8 hrs	1 day	Mon 5/10/04	Mon 5/10/04	Work	
	Marian Arapu: Technical manager	*8 hrs*		*Mon 5/10/04*	*Mon 5/10/04*	Work	
9	Software	8 hrs	1 day	Mon 5/10/04	Mon 5/10/04	Work	
	Andrei Stroiescu: Application developer in Databases; Programming & Con	*8 hrs*		*Mon 5/10/04*	*Mon 5/10/04*	Work	
10	Communications	8 hrs	1 day	Mon 5/10/04	Mon 5/10/04	Work	
	Constantin Dimcea: Subcontractor Project Manager	*8 hrs*		*Mon 5/10/04*	*Mon 5/10/04*	Work	
11	Personnel	8 hrs	1 day	Mon 5/10/04	Mon 5/10/04	Work	
	Mihaela Bora: Methodological&training project coordinator	*8 hrs*		*Mon 5/10/04*	*Mon 5/10/04*	Work	
12	**Digital Library component evaluation**	**32 hrs**	**1 day**	**Tue 5/11/04**	**Tue 5/11/04**	Work	
13	Hardware	8 hrs	1 day	Tue 5/11/04	Tue 5/11/04	Work	
	Marian Arapu: Technical manager	*8 hrs*		*Tue 5/11/04*	*Tue 5/11/04*	Work	
14	Software	8 hrs	1 day	Tue 5/11/04	Tue 5/11/04	Work	
	Andrei Stroiescu: Application developer in Databases; Programming & Con	*8 hrs*		*Tue 5/11/04*	*Tue 5/11/04*	Work	
15	Communications	8 hrs	1 day	Tue 5/11/04	Tue 5/11/04	Work	
	Constantin Dimcea: Subcontractor Project Manager	*8 hrs*		*Tue 5/11/04*	*Tue 5/11/04*	Work	
16	Personnel	8 hrs	1 day	Tue 5/11/04	Tue 5/11/04	Work	
	Mihaela Bora: Methodological&training project coordinator	*8 hrs*		*Tue 5/11/04*	*Tue 5/11/04*	Work	
17	**Evidence collection evaluation (Salaj)**	**32 hrs**	**1 day**	**Wed 5/12/04**	**Wed 5/12/04**	Work	
18	Hardware	8 hrs	1 day	Wed 5/12/04	Wed 5/12/04	Work	
	Marian Arapu: Technical manager	*8 hrs*		*Wed 5/12/04*	*Wed 5/12/04*	Work	
19	Software	8 hrs	1 day	Wed 5/12/04	Wed 5/12/04	Work	
	Andrei Stroiescu: Application developer in Databases; Programming & Con	*8 hrs*		*Wed 5/12/04*	*Wed 5/12/04*	Work	
20	Communications	8 hrs	1 day	Wed 5/12/04	Wed 5/12/04	Work	
	Constantin Dimcea: Subcontractor Project Manager	*8 hrs*		*Wed 5/12/04*	*Wed 5/12/04*	Work	
21	Personnel	8 hrs	1 day	Wed 5/12/04	Wed 5/12/04	Work	
	Mihaela Bora: Methodological&training project coordinator	*8 hrs*		*Wed 5/12/04*	*Wed 5/12/04*	Work	

ID	Task Name	Work	Duration	Start	Finish	Details	Apr 26, '0 M
22	**Extended services evaluation(Salaj)**	**32 hrs**	**1 day**	**Thu 5/13/04**	**Thu 5/13/04**	Work	
23	Hardware	8 hrs	1 day	Thu 5/13/04	Thu 5/13/04	Work	
	Marian Arapu: Technical manager	*8 hrs*		*Thu 5/13/04*	*Thu 5/13/04*	Work	
24	Software	8 hrs	1 day	Thu 5/13/04	Thu 5/13/04	Work	
	Andrei Stroiescu: Application developer in Databases; Programming & Con	*8 hrs*		*Thu 5/13/04*	*Thu 5/13/04*	Work	
25	Communications	8 hrs	1 day	Thu 5/13/04	Thu 5/13/04	Work	
	Constantin Dimcea: Subcontractor Project Manager	*8 hrs*		*Thu 5/13/04*	*Thu 5/13/04*	Work	
26	Personnel	8 hrs	1 day	Thu 5/13/04	Thu 5/13/04	Work	
	Mihaela Bora: Methodological&training project coordinator	*8 hrs*		*Thu 5/13/04*	*Thu 5/13/04*	Work	
27	**Systems dimensioning**	**24 hrs**	**1 day**	**Fri 5/14/04**	**Fri 5/14/04**	Work	
28	Braila C. L.	8 hrs	1 day	Fri 5/14/04	Fri 5/14/04	Work	
	Marian Arapu: Technical manager	*8 hrs*		*Fri 5/14/04*	*Fri 5/14/04*	Work	
29	Salaj C. L.	8 hrs	1 day	Fri 5/14/04	Fri 5/14/04	Work	
	Andrei Stroiescu: Application developer in Databases; Programming & Con	*8 hrs*		*Fri 5/14/04*	*Fri 5/14/04*	Work	
30	N. L. R.	8 hrs	1 day	Fri 5/14/04	Fri 5/14/04	Work	
	Constantin Dimcea: Subcontractor Project Manager	*8 hrs*		*Fri 5/14/04*	*Fri 5/14/04*	Work	
31	Final analysis	8 hrs	1 day	Mon 5/17/04	Mon 5/17/04	Work	
	Mihaela Bora: Methodological&training project coordinator	*8 hrs*		*Mon 5/17/04*	*Mon 5/17/04*	Work	
32	Submission of the PMP	0 hrs	0 days	Wed 6/2/04	Wed 6/2/04	Work	
	Constantin Dimcea: Subcontractor Project Manager	*0 hrs*		*Wed 6/2/04*	*Wed 6/2/04*	Work	
33	Approval of the PMP	0 hrs	0 days	Mon 6/14/04	Mon 6/14/04	Work	
34	**Acquisition process**	**552 hrs**	**40 days**	**Mon 5/17/04**	**Mon 7/12/04**	Work	
35	**Procurement phase**	**168 hrs**	**28 days**	**Mon 5/17/04**	**Wed 6/23/04**	Work	
36	Hardware procurement documentation	40 hrs	5 days	Mon 5/17/04	Fri 5/21/04	Work	
	Marian Arapu: Technical manager	*40 hrs*		*Mon 5/17/04*	*Fri 5/21/04*	Work	
37	Basic software procurement documentation	16 hrs	2 days	Mon 5/17/04	Tue 5/18/04	Work	
	Mihaela Bora: Methodological&training project coordinator	*16 hrs*		*Mon 5/17/04*	*Tue 5/18/04*	Work	
38	Software application procurement documentation	16 hrs	2 days	Mon 5/17/04	Tue 5/18/04	Work	
	Andrei Stroiescu: Application developer in Databases; Programming & Con	*16 hrs*		*Mon 5/17/04*	*Tue 5/18/04*	Work	
39	Communication services procurement documentation	32 hrs	4 days	Mon 5/17/04	Thu 5/20/04	Work	
	Constantin Dimcea: Subcontractor Project Manager	*32 hrs*		*Mon 5/17/04*	*Thu 5/20/04*	Work	
40	Request for offer to potential vendors	48 hrs	6 days	Mon 6/14/04	Mon 6/21/04	Work	
	Mirela Ionescu: Financial & Monitoring coordinator	*48 hrs*		*Mon 6/14/04*	*Mon 6/21/04*	Work	

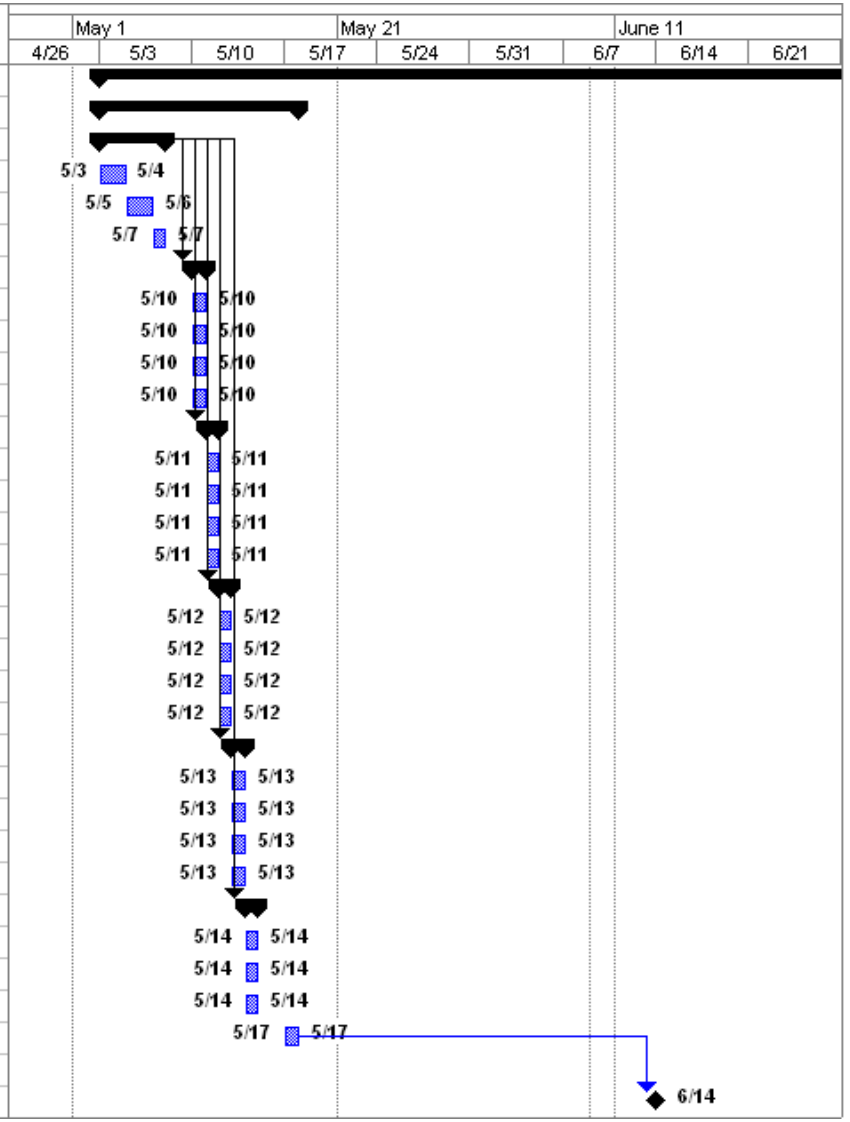
ID		Task Name	Work	Duration	Start	Finish	Details	Apr 26, '0 M
41		**Offer analysis**	**16 hrs**	**2 days**	**Tue 6/22/04**	**Wed 6/23/04**	Work	
42		Offer selection completed and final rapport	16 hrs	2 days	Tue 6/22/04	Wed 6/23/04	Work	
		Mirela Ionescu: Financial & Monitoring coordinator	*16 hrs*		*Tue 6/22/04*	*Wed 6/23/04*	Work	
43		**Acquisition phase**	**384 hrs**	**12 days**	**Thu 6/24/04**	**Fri 7/9/04**	Work	
44		Hardware acquisition	96 hrs	12 days	Thu 6/24/04	Fri 7/9/04	Work	
		Marian Arapu: Technical manager	*96 hrs*		*Thu 6/24/04*	*Fri 7/9/04*	Work	
45		Basic software acquisition (Win XP)	96 hrs	12 days	Thu 6/24/04	Fri 7/9/04	Work	
		Mihaela Bora: Methodological&training project coordinator	*96 hrs*		*Thu 6/24/04*	*Fri 7/9/04*	Work	
46		Application software acquisition(Tinlib Z39.50, TinWEB, TinREAD)	96 hrs	12 days	Thu 6/24/04	Fri 7/9/04	Work	
		Andrei Stroiescu: Application developer in Databases; Programming & Con	*96 hrs*		*Thu 6/24/04*	*Fri 7/9/04*	Work	
47		Communication services acquisition	96 hrs	12 days	Thu 6/24/04	Fri 7/9/04	Work	
		Constantin Dimcea: Subcontractor Project Manager	*96 hrs*		*Thu 6/24/04*	*Fri 7/9/04*	Work	
48		Acquisition completed and final report	0 hrs	0 days	Mon 7/12/04	Mon 7/12/04	Work	
		Mirela Ionescu: Financial & Monitoring coordinator	*0 hrs*		*Mon 7/12/04*	*Mon 7/12/04*	Work	
49		**System implementation (development)**	**136 hrs**	**14 days**	**Tue 7/13/04**	**Mon 8/2/04**	Work	
50		**C. L. Braila**	**40 hrs**	**5 days**	**Tue 7/13/04**	**Mon 7/19/04**	Work	
51		Hardware Installation(NCC, Digital Library)	16 hrs	2 days	Tue 7/13/04	Wed 7/14/04	Work	
		Marian Arapu: Technical manager	*8 hrs*		*Wed 7/14/04*	*Wed 7/14/04*	Work	
		Dragos Neagu: Deputy Director / BCL Representative	*8 hrs*		*Tue 7/13/04*	*Wed 7/14/04*	Work	
52		Software Installation(NCC, Digital Library)	16 hrs	2 days	Thu 7/15/04	Fri 7/16/04	Work	
		Andrei Stroiescu: Application developer in Databases; Programming & Con	*8 hrs*		*Fri 7/16/04*	*Fri 7/16/04*	Work	
		Dragos Neagu: Deputy Director / BCL Representative	*8 hrs*		*Thu 7/15/04*	*Fri 7/16/04*	Work	
53		Communication Installation(NCC, Digital Library)	8 hrs	1 day	Mon 7/19/04	Mon 7/19/04	Work	
		Constantin Dimcea: Subcontractor Project Manager	*4 hrs*		*Mon 7/19/04*	*Mon 7/19/04*	Work	
		Dragos Neagu: Deputy Director / BCL Representative	*4 hrs*		*Mon 7/19/04*	*Mon 7/19/04*	Work	
54		System testing (local)	0 hrs	0 days	Mon 7/19/04	Mon 7/19/04	Work	
		Mihaela Bora: Methodological&training project coordinator	*0 hrs*		*Mon 7/19/04*	*Mon 7/19/04*	Work	
		Dragos Neagu: Deputy Director / BCL Representative	*0 hrs*		*Mon 7/19/04*	*Mon 7/19/04*	Work	
55		**C. L. Salaj**	**48 hrs**	**5 days**	**Tue 7/20/04**	**Mon 7/26/04**	Work	
56		Hardware Installation(NCC, Digital Library, Evidence Collection, Extended services)	16 hrs	2 days	Tue 7/20/04	Wed 7/21/04	Work	
		Marian Arapu: Technical manager	*8 hrs*		*Wed 7/21/04*	*Wed 7/21/04*	Work	
		Maria Carpineanu: President of Zalau „Library Friends" NGO / Project Res	*8 hrs*		*Tue 7/20/04*	*Wed 7/21/04*	Work	
57		Software Installation(NCC, Digital Library, Development)	16 hrs	2 days	Thu 7/22/04	Fri 7/23/04	Work	
		Maria Carpineanu: President of Zalau „Library Friends" NGO / Project Res	*8 hrs*		*Fri 7/23/04*	*Fri 7/23/04*	Work	
		Andrei Stroiescu: Application developer in Databases; Programming & Con	*8 hrs*		*Thu 7/22/04*	*Fri 7/23/04*	Work	
58		Communication Installation(NCC, Digital Library)	16 hrs	1 day	Mon 7/26/04	Mon 7/26/04	Work	
		Maria Carpineanu: President of Zalau „Library Friends" NGO / Project Res	*8 hrs*		*Mon 7/26/04*	*Mon 7/26/04*	Work	
		Constantin Dimcea: Subcontractor Project Manager	*8 hrs*		*Mon 7/26/04*	*Mon 7/26/04*	Work	
59		System testing (local)	0 hrs	0 days	Mon 7/26/04	Mon 7/26/04	Work	
		Mihaela Bora: Methodological&training project coordinator	*0 hrs*		*Mon 7/26/04*	*Mon 7/26/04*	Work	
		Maria Carpineanu: President of Zalau „Library Friends" NGO / Project Res	*0 hrs*		*Mon 7/26/04*	*Mon 7/26/04*	Work	

ID	Task Name	Work	Duration	Start	Finish	Details	Apr 26, '0 M
60	**National Library of Romania**	**48 hrs**	**4 days**	**Tue 7/27/04**	**Mon 8/2/04**	Work	
61	Hardware Installation(NCC, Digital Library)	16 hrs	2 days	Tue 7/27/04	Wed 7/28/04	Work	
	Marian Arapu: Technical manager	*8 hrs*		*Wed 7/28/04*	*Wed 7/28/04*	Work	
	Luminita Gruia: National Library of Romania Representative	*8 hrs*		*Tue 7/27/04*	*Wed 7/28/04*	Work	
62	Software Installation(NCC, Digital Library)	24 hrs	2 days	Thu 7/29/04	Fri 7/30/04	Work	
	Andrei Stroiescu: Application developer in Databases; Programming & Con	*16 hrs*		*Thu 7/29/04*	*Fri 7/30/04*	Work	
	Luminita Gruia: National Library of Romania Representative	*8 hrs*		*Thu 7/29/04*	*Fri 7/30/04*	Work	
63	Communication facilities and services set up(NCC)	8 hrs	1 day	Fri 7/30/04	Fri 7/30/04	Work	
	Constantin Dimcea: Subcontractor Project Manager	*4 hrs*		*Fri 7/30/04*	*Fri 7/30/04*	Work	
	Luminita Gruia: National Library of Romania Representative	*4 hrs*		*Fri 7/30/04*	*Fri 7/30/04*	Work	
64	Coordination between databases	0 hrs	0 days	Mon 8/2/04	Mon 8/2/04	Work	
	Mihaela Bora: Methodological&training project coordinator	*0 hrs*		*Mon 8/2/04*	*Mon 8/2/04*	Work	
65	Whole System testing (local and global)	0 hrs	0 days	Mon 8/2/04	Mon 8/2/04	Work	
	Mihaela Bora: Methodological&training project coordinator	*0 hrs*		*Mon 8/2/04*	*Mon 8/2/04*	Work	
66	Alpha & beta releases. Final release	0 hrs	0 days	Mon 8/2/04	Mon 8/2/04	Work	
	Mihaela Bora: Methodological&training project coordinator	*0 hrs*		*Mon 8/2/04*	*Mon 8/2/04*	Work	
67	**Training (users and system administrators)**	**112 hrs**	**14 days**	**Tue 8/3/04**	**Fri 8/20/04**	Work	
68	**Braila C. L.**	**40 hrs**	**5 days**	**Tue 8/3/04**	**Mon 8/9/04**	Work	
69	Software	16 hrs	2 days	Tue 8/3/04	Wed 8/4/04	Work	
	Mihaela Bora: Methodological&training project coordinator	*16 hrs*		*Tue 8/3/04*	*Wed 8/4/04*	Work	
70	Communication	16 hrs	2 days	Thu 8/5/04	Fri 8/6/04	Work	
	Mihaela Bora: Methodological&training project coordinator	*16 hrs*		*Thu 8/5/04*	*Fri 8/6/04*	Work	
71	Cooperative mode training	8 hrs	1 day	Mon 8/9/04	Mon 8/9/04	Work	
	Mihaela Bora: Methodological&training project coordinator	*8 hrs*		*Mon 8/9/04*	*Mon 8/9/04*	Work	
72	**Salaj C. L.**	**40 hrs**	**5 days**	**Tue 8/10/04**	**Mon 8/16/04**	Work	
73	Hardware (Scanner)	8 hrs	1 day	Tue 8/10/04	Tue 8/10/04	Work	
	Mihaela Bora: Methodological&training project coordinator	*8 hrs*		*Tue 8/10/04*	*Tue 8/10/04*	Work	
74	Software	16 hrs	2 days	Wed 8/11/04	Thu 8/12/04	Work	
	Mihaela Bora: Methodological&training project coordinator	*16 hrs*		*Wed 8/11/04*	*Thu 8/12/04*	Work	
75	Communication	8 hrs	1 day	Fri 8/13/04	Fri 8/13/04	Work	
	Mihaela Bora: Methodological&training project coordinator	*8 hrs*		*Fri 8/13/04*	*Fri 8/13/04*	Work	
76	Cooperative mode training	8 hrs	1 day	Mon 8/16/04	Mon 8/16/04	Work	
	Mihaela Bora: Methodological&training project coordinator	*8 hrs*		*Mon 8/16/04*	*Mon 8/16/04*	Work	

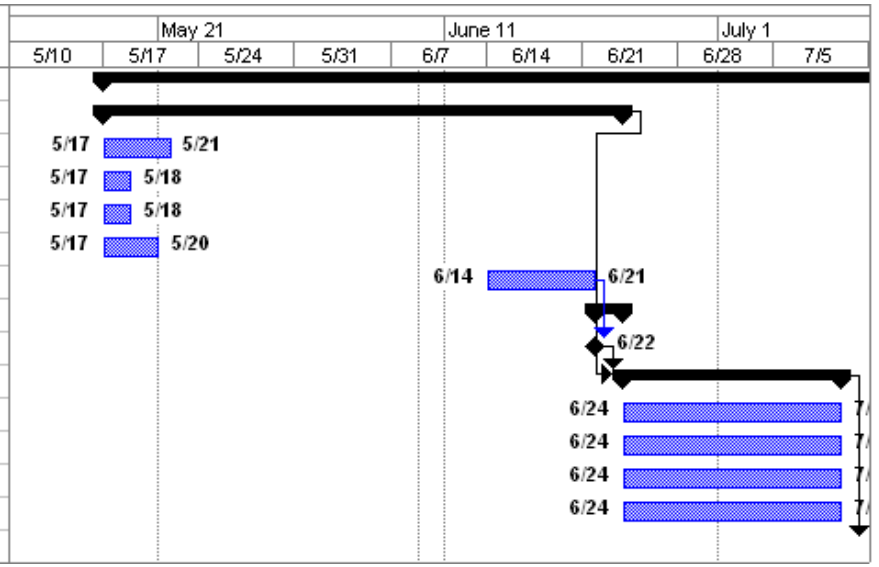
ID		Task Name	Work	Duration	Start	Finish	Details	Apr 26, '0 M
77		**II. L. R.**	**32 hrs**	**4 days**	**Tue 8/17/04**	**Fri 8/20/04**	Work	
78		Software	16 hrs	2 days	Tue 8/17/04	Wed 8/18/04	Work	
		Mihaela Bora: Methodological&training project coordinator	*16 hrs*		*Tue 8/17/04*	*Wed 8/18/04*	Work	
79		Communication	8 hrs	1 day	Thu 8/19/04	Thu 8/19/04	Work	
		Mihaela Bora: Methodological&training project coordinator	*8 hrs*		*Thu 8/19/04*	*Thu 8/19/04*	Work	
80		Cooperative mode training	8 hrs	1 day	Fri 8/20/04	Fri 8/20/04	Work	
		Mihaela Bora: Methodological&training project coordinator	*8 hrs*		*Fri 8/20/04*	*Fri 8/20/04*	Work	
81		Training completion time	0 hrs	0 days	Fri 8/20/04	Fri 8/20/04	Work	
82		**Signing of the provisional acceptance certificate (PAC)**	**0 hrs**	**16 days**	**Mon 8/23/04**	**Tue 9/14/04**	Work	
83		Site inspection	0 hrs	5 days	Mon 8/23/04	Fri 8/27/04	Work	
84		Signature	0 hrs	0 days	Tue 9/14/04	Tue 9/14/04	Work	
85		Official launching	0 hrs	0 days	Tue 9/14/04	Tue 9/14/04	Work	
86		Dissemination	288 hrs	24 days	Wed 9/1/04	Mon 10/4/04	Work	
		Laura Popa: Project Manager RITI Access	*192 hrs*		*Wed 9/1/04*	*Mon 10/4/04*	Work	
		Constantin Dimcea: Subcontractor Project Manager	*96 hrs*		*Wed 9/1/04*	*Mon 10/4/04*	Work	
87		Technical support & assistance	0 hrs	261 days	Wed 9/1/04	Wed 8/31/05	Work	
88		Monitoring & Evaluation	0 hrs	228 days	Wed 9/1/04	Fri 7/15/05	Work	
89		**Final acceptance certificate**	**0 hrs**	**5 days**	**Mon 7/25/05**	**Fri 7/29/05**	Work	
90		Site inspection	0 hrs	5 days	Mon 7/25/05	Fri 7/29/05	Work	
91		Signature	0 hrs	0 days	Fri 7/29/05	Fri 7/29/05	Work	

8.3 Project tasks schedule

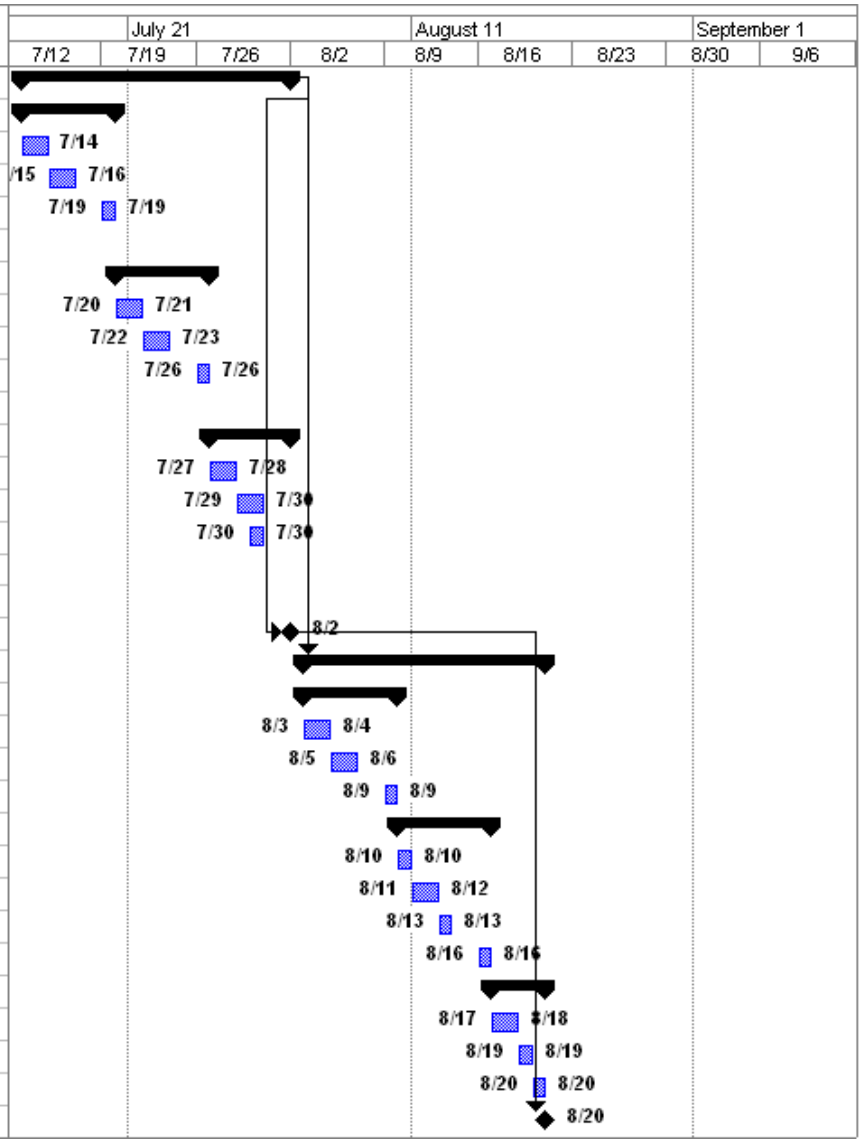
ID	Task Name
1	**Library informatics system**
2	**Data analysis**
3	**Data collecting**
4	Site survey Braila County Library
5	Site survey Salaj County Library
6	Site survey National Library of Romania
7	**H.C.C. component evaluation**
8	Hardware
9	Software
10	Communications
11	Personnel
12	**Digital Library component evaluation**
13	Hardware
14	Software
15	Communications
16	Personnel
17	**Evidence collection evaluation (Salaj)**
18	Hardware
19	Software
20	Communications
21	Personnel
22	**Extended services evaluation(Salaj)**
23	Hardware
24	Software
25	Communications
26	Personnel
27	**Systems dimensioning**
28	Braila C. L.
29	Salaj C. L.
30	N. L. R.
31	Final analysis
32	**Submission of the PMP**
33	Approval of the PMP



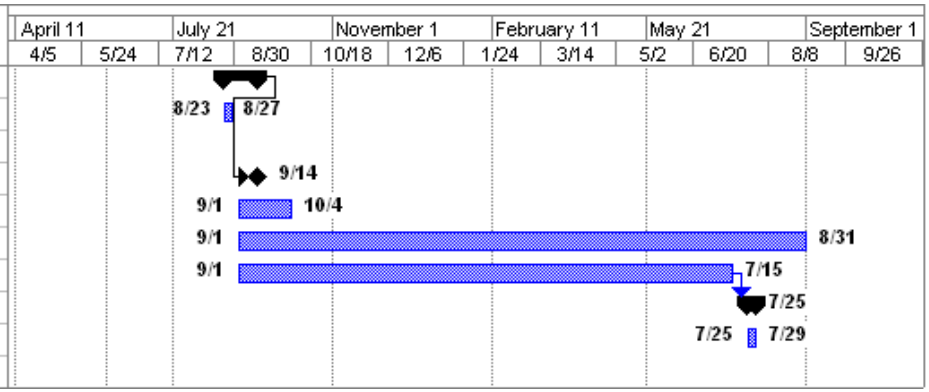
ID	Task Name
34	**Acquisition process**
35	**Procurement phase**
36	Hardware procurement documentation
37	Basic software procurement documentation
38	Software application procurement documentation
39	Communication services procurement documentation
40	Request for offer to potential vendors
41	**Offer analysis**
42	Offer selection completed and final rapport
43	**Acquisition phase**
44	Hardware acquisition
45	Basic software acquisition (Win XP)
46	Application software acquisition(Tinlib Z39.50, TinWEB, TinREAD)
47	Communication services acquisition
48	Acquisition completed and final report



ID	Task Name
49	**System implementation (development)**
50	**C. L. Braila**
51	Hardware Installation(NCC, Digital Library)
52	Software Installation(NCC, Digital Library)
53	Communication Installation(NCC, Digital Library)
54	System testing (local)
55	**C. L. Salaj**
56	Hardware Installation(NCC, Digital Library, Evidence Collection, Extended services)
57	Software Installation(NCC, Digital Library, Development)
58	Communication Installation(NCC, Digital Library)
59	System testing (local)
60	**National Library of Romania**
61	Hardware Installation(NCC, Digital Library)
62	Software Installation(NCC, Digital Library)
63	Communication facilities and services set up(NCC)
64	Coordination between databases
65	Whole System testing (local and global)
66	Alpha & beta releases. Final release
67	**Training (users and system administrators)**
68	**Braila C. L.**
69	Software
70	Communication
71	Cooperative mode training
72	**Salaj C. L.**
73	Hardware (Scanner)
74	Software
75	Communication
76	Cooperative mode training
77	**N. L. R.**
78	Software
79	Communication
80	Cooperative mode training
81	Training completion time



ID	Task Name
82	**Signing of the provisional acceptance certificate (PAC)**
83	Site inspection
84	Signature
85	Official launching
86	Dissemination
87	Technical support & assistance
88	Monitoring & Evaluation
89	**Final acceptance certificate**
90	Site inspection
91	Signature



9. Schedules and Milestones

A detailed scheduled is presented above and will be maintained through the study to show relationships and durations of specific tasks. The estimated completion dates could exceed due to some unexpected events or facts. However, the overall timing of the efforts is reflected in the major milestones summarized below:

Offer selection completed and reported

This milestone indicates the completion of hardware and Microsoft licenses suppliers' selection as a result of RFQs sent to the main players on the domestic market.
The completion time should be no later than 23rd of June, 2004.

Acquisition completed and reported

This milestone indicates the end of the procurement stage in the project. All necessary hardware equipment and basic software (Microsoft licenses) is acquired and the project may proceed to the next stage – System implementation.
The completion time should no be later than 12th of July, 2004.

System implemented and tested

This milestone indicates the end of the main stage in the project. At the completion time the system must be installed, tested and fully functional.
The completion time should no be later than 2nd of August, 2004.

Training

This milestone indicates the end of the training stage in the project. At the completion time, the system administrators and users/librarians are trained and ready to use and maintain the system.
The completion time should no be later than 20th of August, 2004.

Signing of the Provisional Acceptance Certificate

This milestone indicates that the system is tested and fully functional, the corresponding training for users and system administrators was provided and the RITI Team in close cooperation with Local Partners and IME verified all the locations and the whole system. At the completion time, the Provisional Acceptance Certificate will be signed by all the parties.

Official launching

This milestone indicates that the Provisional Acceptance Certificate was signed by Local Partners, IME and RITI team. At the completion time the system is implemented, that means all necessary infrastructure is installed, configured and working properly, software applications are installed, configured and working properly and all system tests passed successfully.
The completion time should no be later than 14th of September, 2004.

Signing of the Final Acceptance Certificate

This milestone indicates that the Final Acceptance Certificate was signed by Local Partners, IME and RITI team. At the completion time the system benefited 12 months warranty period, the monitoring & evaluation was performed and the final report was submitted.
The completion time should no be later than end of July, 2004.

10. Budget and Financial Forecast

10.1 Costs

ID	Budget Category	Months															
		May'04 - Aug'04				Sep'04 - Dec'04				Jan'05 - Apr'05				May'05 - Aug'05			
	Project Costs	SCL	BCL	NLR	RITI	SCL	BCL	NLR	RITI	SCL	BCL	NLR	RITI	SCL	BCL	NLR	RITI
1	*Anticipated start-up costs*																
	Equipment																
	Software																
	Basic Software																
	Internet access																
	Training																
	Others (please list below)																
	- Preliminary phase																
	- Procurement																
	- Office Set-up																
	- Staffing																
	- Official launching (dissem.)																
	Subtotal start-up costs																
2	*Anticipated recurring costs*																
	Internet services																
	Staff																
	Other services																
	Digital services																
	Support & assistance																
	M & E																
	Subtotal recurring costs																
3	*Total anticipated costs*																

ID	Budget Category	Cost share	Cost share Local Partners			Total
		AED/RITI	SCL	BCL	NLR	Cost Share
	Project Costs					
1	***Anticipated start-up costs***					
	Equipment					
	Software					
	Basic Software					
	Internet access					
	Training					
	Others (please list below)					
	- Preliminary phase					
	- Procurement					
	- Office Set-up					
	- Staffing					
	- Official launching (dissem.)					
	Subtotal start-up costs					
2	***Anticipated recurring costs***					
	Internet services					
	Staff					
	Other services					
	Digital services					
	Support & assistance					
	M & E					
	Subtotal recurring costs					
3	***Total anticipated costs***					

Category “Equipment” includes:

Hardware:

- Intel Server
- Barcode labels
- Barcode readers
- Computers
- Laminate device
- Laser printer
- Laser network printer
- Thermal printers
- Scanner
- Mass Storage devices
- Equipments (upgrade)

Category “Software” includes:

- TinLib Z39.50 software
- TinWeb
- TinREAD

Category “Basic Software” includes:

- Four Licenses Windows XP Professional (OEM)

Category “Internet access” includes the corresponding amount for one year period of time Internet subscription Simleu & Jibou Local Libraries.

Category “Training” includes:

- General purpose training
- Specific software training
- Training spaces, office supplies, user manual

Category “Others (staffing)” includes:

The corresponding costs of the Salaj & Braila County Libraries and NLR personnel involved in project implementation

Category “Internet services” includes:

The corresponding monthly recurring costs for Internet subscription

Category “Staff” includes:

The corresponding monthly recurring costs for all staff involved in system operation

Category “Support & assistance” includes:

The corresponding recurring costs for all the locations.

10.2 Expected Benefits of the Project

Considering the nature of the project the expected revenues will be offset by

- Reducing the redundant costs of cataloguing data;
- Reducing of the expenses related to the stationary;
- Increasing of service level provided to the citizens;
- Increasing of transparency, efficiency and readers' participation;
- Improving the efficiency of book delivery process which should result in reduced operational costs for the participating libraries as well as improved accuracy of the book descriptions/presentations;
- Sharing the information at the country level;
- Improvement of general IT skills level of the Local Partners personnel.

11. Risk Analysis and Management

Risks will be identified, evaluated and minimized (if possible) through the use of schedules, metrics and assignment of specific responsibilities. Potential risks may include delivery delays, timeliness of approvals and public perception issues etc. Monthly reviews held by the study team of contract progress and deliverables will assess potential problems and develop appropriate actions.
At the moment of the project plan elaboration, the following risks were identified:

1. **Delays in beginning of "Procurement & Acquisition Phase"**
   It is possible that the "Procurement & Acquisition Phase" to begin at the middle of June due to the fact that the present Project Management Plan was submitted at the end of May 2004. The probability of occurrence is high. IME in close cooperation with RITI team and Local Partners will try to review the PMP, to add or modify different chapters, to approve it and to start the next phase as soon as possible.

2. **Delays in ordering hardware equipment & basic software**
   As soon as the PMP will be approved, the next phase of project will start. A request for quotation will be sent to the main players on the domestic market for the required components. The corresponding price for the hardware equipment can increase or decrease according to the prices expressed in USD provided by vendors.
   The risk exists from the theoretical point of view, taking into consideration the fact that IME sent two months ago a RFQ to the best vendors and based on it, IME prepared the annex price from the contract signed between IME and RITI. The vendors' replies/offers are available 60 days. Consequently, the hardware equipment and the Microsoft licenses should be ordered as soon as PMP will be completed and approved.

3. **Equipment and Internet services supply delay**
   Has a low occurrence probability because in the process of offer selection will be selected only the suppliers that will guarantee fast and in time delivery of the hardware equipment and Internet services.

The impact on the project is high due to the fact that the delay on the hardware equipment and Internet services acquisition will induce delays in subsequent tasks of the project.

4. Publication delay of the school bibliography / press on the Internet

The main problem is to get the copyright for books that are included in the school bibliography. The impact is medium because the main books that are included in the school bibliography are older than 60 years and for these is not necessary to get the copyright. The Braila and Salaj County Libraries have already sent a request to ORDA (Romanian Copyright Office) in order to get the copyright for books/periodicals that are protected by the copyright law.

5. Delays in establishing loaning and interlibrary loans procedure

The probability is reduced because the NLR - methodological coordinator of public libraries - is involved in this process. There are already precise rules for loaning and interlibrary loans which will be applied and adjusted for electronic transactions.

6. Communications & Database. Architecture used, database impact

The communication & database structure are already tested for the local and remote access and the probability of occurrence is low. The used systems' architecture is based on international standards (Z39.50, ISBD and Unicode); the above mentioned systems are tested and fully operational.

7. Delays in developing of a customized software for Salaj County Library

The Evidence Collection customized software for Salaj County Library is in the test phase and is responding properly to main functionality tests. Till the end of June, it will be fully tested and tuning according to their requirements.

8. Delays caused by digitization of a large quantity of data

The digitization process is a long time process scheduled on standards.
The digitized materials will be introduced periodically in DL system and they will be evaluated based on the follow up formal indicators (number of scanned pages, number of digitized pages, number of accessed multimedia documents, number of downloaded multimedia pages, etc). The probability of occurrence is low due to the fact that the hardware equipment, the software structure and the corresponding training that will be provided by IME have high capabilities to accomplish the required tasks.

9. Users training process

The level of computer literacy of the selected libraries users is good because they already participated to training sessions and they are currently using some applications of TinLib software. The probability of occurrence is low due to the fact that the corresponding training sessions will be provided based on the individual and cooperative working mode. All of the selected libraries have properly rooms and technical facilities to carry on the training process.

Risk No.	Identified risk	Project impact	Probability	Risk Reduction Plan	Responsibility
1	Delays in beginning of "Procurement & Acquisition Phase"	High	High	The present PMP should be completed and approved as soon as possible in order to start the next phase of the project	Subcontractor Project manager BCL & SCL & NLR representatives RITI Project Manager
2	Delays in ordering hardware equipment & basic software	High	Medium	The corresponding RFQs should be sent to the main players on the domestic market for the required components in due time in order for the contract prices to remain the same.	Subcontractor Project manager BCL & SCL & NLR representatives RITI Project Manager
3	Equipment and Internet services supply delay	High	Low	- Additional requirements for the suppliers that guarantee for in time delivery - Penalties for the suppliers in case of unjustified delays	Subcontractor project manager BCL & SCL & NLR representatives RITI Project Manager
4	Publication delay of the school bibliography/ press on the Internet	Medium	Medium	Sending a request concerning copy write to ORDA by Braila County Library and Salaj County Library	BCL & SCL representatives
5	Delay in establishing loaning and interlibrary loans procedure	Medium	Low	Written procedures	NLR representative
6	Communication & Database. Architecture used, database impact	High	Low	Establishing test procedure for technical evaluation	Subcontractor Technical manager
7	Delay in developing a special software for Salaj County Library	Medium	Low	Establishing stages and datelines	Subcontractor Technical manager

8	Delays caused by digitization of a large quantity of data	Medium	Low	Establish a time schedule for digitization	Braila C.L & Salaj C.L. Representatives
9	Users training process	Medium	Low	Written procedures for application usage On site training	Subcontractor project manager

12. Monitoring and Evaluation Strategy and Timetable

12.1 Objectives of the Monitoring and Evaluation Activity

The objective of the monitoring and evaluation activity is to collect and analyze data for measuring the following key criteria that should be met so as the "Library Informatics System" project to be considered successful:

- Impact in term of improvements in local and national libraries services
- Replicability – it is important to produce results and develop replicable models across the country;
- Self-Sustainability of the benefits in the long term, in social, environmental, technical, economic and financial terms;
- Innovative technologies and applications (e.g. using of the new technologies);
- Cost-share (local partners contribution);
- Scale. The level of local and national libraries accessing.

12.2 Set of indicators to follow-up

In measuring the key criteria listed above, a set of quantitative and qualitative indicators will be used as follows:

12.2.1 Indicators to be used in the baseline analysis

A. General questions:

How many inhabitants do the selected counties have (Salaj & Braila), respectively Bucharest?

What is the age distribution/profession in the selected counties, respectively Bucharest?

What is the unemployment rate in the selected counties and Bucharest?

How many personnel work at Salaj & Braila County Libraries and National Library of Romania?

How many IT personnel work at Salaj & Braila County Libraries and National Library of Romania?

What is the existing IT infrastructure within BCL & SCL & NLR?

What types of software applications are running at SCL &BCL &NLR now?

How many other county libraries have already adopted this TinLib solution?

How many other county libraries would like to be part of this integrated system?

What was the allocated budget level in each of the county libraries (Salaj & Braila) and NLR for the last year?

What was the allocated IT budget level in each of the county libraries (Salaj & Braila) and NLR for the last year?

B. Specific questions:

How many citizens interacted with the Local Partners (SCL & BCL & NLR) in the last two years?
How many registered readers had the Local Partners in the last two years?

What is the age/profession/sex distribution for the libraries readers in the selected county libraries and NLR?

How many titles are recorded within each of the county libraries (including local libraries Simleu & Jibou) and NLR? (by type: monographies, periodicals, AV materials, electronic records)

How many titles were loan on monthly basis?

How many new titles/books are purchased in a month?

How many books are lost in a month?

What is the number of overdue books in a month?

How many loan requests do the selected county libraries and NLR get from readers in a month?

What is the average length of time for serving a reader at the desk?

How long does it take for the staff to prepare a new card/subscription form/file for a new reader/customer?

How many OPAC stations are for end users?

What is the most library service used?

Do county libraries & NLR have a record of complaints?

How many complaints are recorded in a month?

How many complaints are sorted out in a month for each library?

What's the level of readers' dissatisfaction for the services provided?

What is the frequent reason the citizens/readers quote in their complaints?

What is the operational cost of the Local Partners (stationery, communications and overheads)?

12.2.2 Indicators to be used in the follow-up formal evaluations

Objective 1: Measurement of Impact

- No. of total bibliographical records shared in the NCC
- No. of titled accessed using NCC
- No. of users who accessed NCC
- No. of online registered users in NCC
- No. of interlibrary request loans in NCC
- No. of hits on the NCC
- No. of bibliographical descriptions for multimedia documents in DL
- No. of pages scanned for DL
- No. of pages digitized for DL
- No. of multimedia documents (full text, images, sounds etc) accessed in DL
- No. of multimedia documents (full text, images, sounds etc) downloaded (Mb) from DL
- No. of documents inventoried using barcode
- No. of printed pages for users
- The benefit of implementing and using NCC, DL, Evidence Collection, Extended services
- No. of user complaints

Objective 2: Measurement of Replicability – the potential for repeating "Library Informatics System" success in other communities, areas, regions

Evaluate how the Libraries Informatics System can be implemented in other county libraries (flexibility, the use of standard features, easy customizable).

Evaluate until 5th of August 2005 the number of new libraries connected to the National Collective Catalogue, number of the new libraries connected to the Digital Library, number of regional NCC and DL developed and maintained.

Objective 3: Measurement of Self-Sustainability

The following indicators measure the county libraries and NLR's capacity of self-sustainability of the Library Informatics System after RITI withdraws from the project:

- Hardware, telecommunications and software up-grades allocated funds (amount/year);
- The ability of the selected libraries to use the software application (NCC, DL) and take the initiative to improve it, to introduce new services
- The ability of the local county councils to allocate budget for libraries' development
- The ability of the involved libraries to maintain the relationship with the project software developer and local ISP, in the absence of RITI team.
-

Objective 4: Measurement of Innovative Technologies and Applications

What types of new services are implemented for NCC and DL?
What type of new access mode is implemented for customers?
What types of new digitized content are created for DL?
What type of security and database administration procedures are used?
What are the benefits of implementing innovative technologies?

Objective 5: Measurement of Cost Share

What contribution does the local partners make available every quarter:
- Cash investment
- Equipment
- Software
- Connectivity
- In-kind contribution
- Other (please specify)

12.3 Methodology

12.3.1 Tools for data collection

The ways that will be used for collecting data are:
- Interviews;
- Financial and performance reports provided by the local partners;
- Questionnaires;
- Templates;
- Evaluation forms.

12.3.2 Methodology for using the tools for data collection

12.3.2.1 Baseline Analysis

Data gathered by Subcontractor together with the Local Partners representatives and Local Field Project Consultant (Peace Corps Volunteer) during the development of the project management plan will serve as the foundation for the baseline analysis (see Annex 1).
Subcontractor will work closely with the appointed Peace Cops Volunteer and the Local Partners in gathering the information for the baseline analysis.

12.3.2.2. Ongoing monitoring and evaluation

- Interviews with citizens, libraries employees,
- Site visits;
- Focus groups;
- Data submitted on regular basis by the libraries staff; At the end of each month the libraries staff will fill in templates of indicators (see **Annex 1** and **Annex 2)**;
- Other sources.

12.3.3 Framework for the Local Partners to collect the relevant data

Periodically the Braila & Salaj representatives will collect the relevant information for project monitoring and evaluation using the template provided by RITI-Access in Annex 2 (follow-up indicators). The questionnaire in the **Annex 3** will be used to collect staff opinions about the impact of Libraries Informatics System.

Process the data collected

Data collected at the end of each period will be compared using different statistic methods and variations (e.g. differences between values captured at the end of one month and values captured the previous month) will be calculated.
Graphical representation will be used for showing the trend of indicators over the duration of the project.

Analyze the data processed

Based on the data processed in the previous stage, the project team will analyze the performance and impact of the project against the five criteria established in the Request for Concept Paper. Corrective actions for the project in terms of performance criteria, time and money will be taken as appropriate.

Anticipated Challenges to Successful Monitoring & Evaluation and Solutions for Overcoming these Challenges

Challenges:

- Resistance by Local Partners to sharing information if the project is not performing well;
- Lack of attention to detail by Project Partners in keeping detailed data.

Solutions:

- Performing onsite audits by RITI project team;

- Having IME or Salaj Peace Corps Volunteer train local partners in efficient data collection and reporting to minimize administrative burden

12.4 Expected Timeframe for the Monitoring and Evaluation Activity

The monitoring and evaluation activity will start immediately after the system implementation and finish by August 5th 2005.

The first activity that will take place is a clear and detailed baseline analysis. This will be followed by regular evaluation that will gather the necessary data to assess what has happened and introduce changes (if necessary) in order to improve and better adapt the project to reality. In the beginning, the regular evaluations will take place each month for half a year. If the project evolves as expected, the evaluations will then take place quarterly.

In August 2005 a RITI final evaluation will take place in order to evaluate what has been accomplished, provide explanations of how it happened and disseminate the results and lessons learned among other organizations that might need them.

12.5 Responsibilities

Monitoring and Evaluation activity will be jointly conducted by the Project Manager and Technical Advisor based in Washington DC. IME Romania, the Braila & Salaj County Libraries and NLR representatives, including Salaj Peace Corps Volunteer will actively support the process of gathering the necessary data during baseline analysis, monitoring and follow-up evaluation.

13. Project close–out plan

The project close-out plan must include a plan for archiving the history of the project, a final evaluation document with lessons learned and a plan to disseminate the lesson learned to other interested organizations.

13.1 Archive the history of the project

13.2 Project final evaluation

The final evaluation document will cover the following points:

13.2.1 Background

13.2.2 USAID Requirements

13.2.3 Project Achievements

13.2.4 Unanticipated Outcomes

13.2.5 Evaluation Process

13.2.5.1 Planning

13.2.5.2 Indicator issues

13.2.6 Project implementation

13.2.6.1 Strength

13.2.6.2 Weaknesses

13.2.6.3 Lesson learned

13.2.7 Project Direction and Management

13.2.7.1 Communication policies and practices

13.2.7.2 Operational procedures

13.2.8 Project partner selection

13.2.8.1 Lessons learned

13.2.9 Equipment specification, acquisition, and delivery

13.2.9.1 Equipment troubles

13.2.9.2 Lesson learned

13.2.10Project partner training

13.2.10.1 Training program

13.2.10.2 Staff training

13.2.10.3 Lesson learned

13.2.11 Survey data

13.2.11.1 Sustainability findings

13.2.11.2 Impact of business conditions

13.2.11.3 Competition

13.2.11.4 Project incomes

13.2.11.5 Project services

13.2.11.6 Skill evolution among users

13.2.11.7 Computer use

13.2.11.8 Staff characteristics

13.2.12 Assumptions and outcomes

13.2.13 Future prospects

13.2.13.1 Probable future models for projects

13.2.13.2 Building national and donor relationship

13.2.13.3 Collaboration with umbrella organizations, associations and NGOs

13.2.13.4 Model replication requirements

13.2.13.5 USAID and AED/RITI Access project outcomes

13.3 Plan to disseminate the lesson learned

14. Approvals

We certify that this Project Management Plan reflects the scope of the project and that we can meet the enclosed schedule and cost requirements. We accept the responsibilities outlined in this plan, which reflect the USAID and AED/Washington regulations and requirements and beneficiaries' expectations.

15. Annex 1

RITI-ACCESS PROJECT
Baseline Analysis for Library Informatics System

Date of Submission:
Name of Person Submitting Report:

Objectives and Measurement Criteria	***Number/ Amount***	***Comments***
A. General questions: How many inhabitants do the selected counties have (Salaj & Braila), respectively Bucharest? What is the age distribution/profession in the selected counties, respectively Bucharest? What is the unemployment rate in the selected counties and Bucharest? How many personnel work at Salaj & Braila County Libraries and National Library of Romania? How many IT personnel work at Salaj & Braila County Libraries and National Library of Romania? What is the existing IT infrastructure within BCL & SCL & NLR? What types of software applications are running at SCL &BCL & NLR now? How many other county libraries have already adopted this TinLib solution? How many other county libraries would like to be part of this integrated system? What was the allocated budget level in each of the county libraries (Salaj & Braila) and NLR for the last year? What was the allocated IT budget level in each of the county libraries		

(Salaj & Braila) and NLR for the last year? **B. Specific questions:** How many citizens interacted with the Local Partners (SCL & BCL & NLR) in the last two years? How many registered readers had the Local Partners in the last two years? What is the age/profession/sex distribution for the libraries readers in the selected county libraries and NLR? How many titles are recorded within each of the county libraries (including local libraries Simleu & Jibou) and NLR? (by type: monographies, periodicals, AV materials, electronic records)? How many titles were loan on monthly basis? How many new titles/books are purchased in a month? How many books are lost in a month? What is the number of overdue books in a month? How many loan requests do the selected county libraries and NLR get from readers in a month? What is the average length of time for serving a reader at the desk? How long does it take for the staff to prepare a new card/subscription form/file for a new reader/customer? How many OPAC stations are for end users? What are the most library services used? Do county libraries & NLR have a record of complaints? How many complaints are recorded in a month? How many complaints are sorted out in a month for each library? What's the level of readers' dissatisfaction for the services provided? What is the frequent reason the citizens/readers quote in their complaints? What is the operational cost of the Local Partners (stationery, communications and overheads)?		

16. Annex 2

RITI-ACCESS PROJECT
Follow-up evaluation for Library Informatics System

Date of Submission:
Name of Person Submitting Report:

Objectives and Measurement Criteria	Number/Amount	Comments
OBJECTIVE 1: MEASUREMENT OF IMPACT		
No. of total bibliographical records shared in the NCC		
No. of titled accessed using NCC		
No. of users who accessed NCC		
No. of online registered users in NCC		
No. of interlibrary request loans in NCC		
No. of hits on the NCC		
No. of bibliographical descriptions for multimedia documents in DL		
No. of pages scanned for DL		
No. of pages digitized for DL		
No. of multimedia documents (full text, images, sounds etc) accessed in DL		
No. of multimedia documents (full text, images, sounds etc) downloaded (Mb) from DL		
No. of documents inventoried using barcode		
No. of printed pages for users		

The benefit of implementing and using NCC, DL, Evidence Collection, Extended services		
No. of user complaints		
OBJECTIVE 2: MEASUREMENT OF RELEVANCE AND REPLICABILITY		
No. of new libraries connected to NCC		
No. of new libraries connected to DL		
No. of regional NCC created		
No. of regional DL created		
OBJECTIVE 3: MEASUREMENT OF SELF-SUSTAINABILITY		
Hardware, telecommunications and software up-grades allocated funds (amount/year)		
The ability of the selected libraries to use the software application (NCC, DL) and take the initiative to improve it, to introduce new services		
The ability of the local county councils to allocate budget for libraries' development		
The ability of the involved libraries to maintain the relationship with the project software developer and local ISP, in the absence of RITI team.		
OBJECTIVE 4: USE OF INNOVATIVE TECHNOLOGIES AND APPLICATIONS		
What types of new services are implemented for NCC and DL?		
What type of new access mode is implemented for customers?		
What types of new digitized content are created for DL?		
What type of security and database administration procedures are used?		
What are the benefits of implementing innovative technologies?		

OBJECTIVE 5: MEASUREMENT OF COST-SHARE		
What contribution does the local partners make available every quarter: - Cash investment - Equipment - Software - Connectivity - In-kind contribution - Other (please specify)		

17. Annex 3

Questionnaire

Please rate the following statements according to your experience with the TinLib software application, the Internet connectivity and the customer service representative who assisted you.

Questions	Always	Usually	Sometimes	Never	Not applicable	Comments
Are you satisfied with the application's interface?						
Are you satisfied with the application's navigation system?						
Are you satisfied with the application's response time (when searching a book in the database, etc)?						
Are you satisfied with the application's messages and the explanation provided by the application when an error occurs?						
Are you satisfied with the application's reports number and format?						
Are you satisfied with the user manual?						
Are you satisfied with the application's security system?						
Have you recently had problems with the application?	Yes		No			
If the answer is "Yes", what kind of problems did you have? Please specify.						
Are you content with the Internet connectivity?	Yes		No			
The customer service representative took the time necessary to answer my questions in a satisfactory manner						

When the customer service representative did not know the answer to my questions, he/she researched the answer and responded back to me in a timely manner						
The customer service representative maintained a positive attitude and professionalism						
The customer representative demonstrated initiative and tenacity in resolving any problems encountered						

Your name:

_____

Your position:

_____

Your email address:

_____

Location:

_____

Signature:

_____

Date of submission:

_____