CONTACTNET

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THINKING FUTURE

CONTACTNET

Consulting
Project management
Business development
Software development
Market research
Publishing

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Company Info

CONSULTING
PROJECT MANAGEMENT
BUSINESS DEVELOPMENT
SOFTWARE DEVELOPMENT
MARKET RESEARCH
PUBLISHING

ABOUT US

CONTACT NET LTD is an innovative SME set up in Romania in 2000, all its activities being targeted towards the deployment and adoption of Information Society Technologies, in the context of deep transformations and dynamic restructuring, and the provision of enhanced possibilities to all citizens to be integrated and adapted to the new realities.

Our company activity covers several fields focusing on Project Management, Consulting and Business development, Market Research, Publishing, Trainings, and Software & Services development.

CONTACT NET Ltd is ISO 9001 certified since 2005.

Consulting and Project Development

Since 2002 CONTACT NET has been focusing on the challenging and brain-intensive field of Project development, coordination and management - our projects involving research, innovation and new technology implementation, following and often foreseeing the knowledge-based society international trends.

We currently provide consulting for the preparation of European IST projects, and R&D projects for international and national auctions and project contests.

Since 2003 CONTACT NET team courageously took the responsibility of international projects coordination, such as IOSSPL and EK-HR, the main R&D projects focusing on multi-language handwriting-recognition systems, libraries automation and web-integration based on Grid technology. For the projects timeframe we have also set up and coordinated project-offices in several countries (France, Germany, Russia, Czech Republic, Poland), closed partnerships with local research institutes and companies, and recruited and trained the required personnel to fulfill the project specific tasks.

Governmental Consulting and Projects

In 2004 we have been selected as official consulting providers for the World Bank-funded Governmental programme GFP - Grant Facility Programme - the national-scale award of grants following the publication of several Calls for Proposals under the general goals of the

DR. ADINA RIPOSAN-TAYLOR
General Manager
www.contact-net.ro/adinariposan.php

Knowledge Economy National Project. We have provided Consulting services to the Ministries involved and worked out the mechanism, the procedures and the methodology required for the Calls for Proposals organizing, the Application process and packages, Eligibility & Administrative Compliance guidelines, Evaluation & Selection criteria and procedures, Coordination & Supervision mechanism, Uniform Reporting Guidelines, Monitoring & Impact Assessment Process for the entire GFP Programme, as well as an outline of the Information & Dissemination Plan.

Software and Services Development

Our Software and Services development department is growing and consolidating around the highly talented young and visionary team of developers, providing services ranging from systems and requirements analysis to the development, implementation, testing and support.

The ICT projects of national importance we are undergoing, with wide international implications, address the libraries automation and integration at the national scale, aiming to fulfill the integration within the European libraries arena, portals development, web-integration of national associations, mayoralties, as well as support for E-Inclusion (implementation of Adaptable Multimodal Interfaces for Visually Impaired people to access Virtual Cultural Patrimony). By having proven the value of the company human capital at the top of international expectations, our client portfolio covers today a wide range of activity domains and geographical locations.

R&D activities are conducted in parallel

Our main objectives and on-going research and development (R&D) efforts are in the areas of Grid technology and Virtual Organisations management, Portal technologies, Security infrastructures and applications, Mobile Computing, Digital Library technologies, Embedded Systems, Handwriting recognition software, Cognition.

Market Research

Our long-run market study activities have extended from the internal surveys to the international market research projects. Our studies are always connected and support the R&D activities, addressing major societal objectives and advanced research goals (multi-language handwriting recognition, automated & digital libraries, digital radiology, vehicles mobile guidance and monitoring).

Publishing

In support to the projects development and coordination, our Publishing team has been editing print and on-line magazines of national audience in the ICT field, in both English and Romanian languages. Our magazines "E&m Global Perspective - Integration and Connectivity Today" and "XXI Solutions - Competitive Management in the Informational Society" have proven high success since the very launch and have attracted both national and international audience.

OUR VISION

is to always think "one step ahead" and stay confident that anything that proves feasible, responsible and worth doing it is worth and possible to be accomplished.

OUR MISSION

By every accomplishment, in the context of deep transformations and dynamic restructuring, CONTACT NET bridges the gap between opportunity and success.

We set a target to identify those critical areas where our solutions could prove reliably supportive to our customers, contribute to a substantial number of critical areas turning clear and provide reliable solutions to identified problems.

By informing in-depth and offering professional support for development and implementation guidance, CONTACT NET makes a point of acting as a "link" between aims and reality.

OUR POLICY

is to salute our partners' initiative, jot down our own ideas, agree on the best alternative, proceed and develop the entire process.

Through innovative initiative, determined hard work, effective communication and mutual respect, every project we approach benefits from the enthusiasm of a young and visionary team of professionals, permanently oriented towards meeting our customers' requirements at the peak of their expectations.

Projects
Portofolio
HR-EK

HR-EK
Multi-country Handwriting-Recognition project
http://www.contact-net.ro/projects_hr.php

EK-HR is a multi-country and multi-year
ICT and Market Research Project
for the development of advanced
Handwriting-Recognition software for
the next generation Tablet PCs.
The project covers more than 20 countries from
Europe, Asia, South America and Africa.
The project is developed by EMERSON
KENNEDY Handwriting Group, US, in partner-
ship with CONTACT NET.

PROJECT OFFICES
http://www.contact-net.ro/projects_hr_offices.php

In the first stage of the project development,
CONTACT NET has undergone the market
assessment and specific national conditions
evaluation, from the legal, fiscal, economical,
human resources and sociological points of
view, for the initiation or extension of the proj-
ect in every new country approached by the
project.

Further on, for the project timeframe,
CONTACT NET has set up and coordinated proj-
ect-offices in several countries (France, Germany,
Russia, Czech Republic, Poland), closed partner-
ships with local research institutes and companies,

Germany, Munich

France, Paris

*"Emerson Kennedy has been working closely with Dr. Adina
Riposan-Taylor and her company CONTACT NET for well
over a year, and the work she has performed has been invalu-
able to us. Opening an office in one foreign country can be a
pressured affair, let alone opening several concurrently… Her
friendly approach to our queries and concerns has helped find
paths through some very rough spots and handle the numer-
ous crises that always seem to emerge. She has also consis-
tently worked with our US staff to find innovative business solu-
tions…"*

Paul K. Bryant
President, EMERSON KENNEDY -
Redmond, Washington, USA

Czech Republic, Prague

and recruited and trained the required personnel to fulfill the project specific tasks.

2003 - CONTACT NET Participated in:
- Project preparation for the auction
- Set up of the data collection centres in the European countries
- Co-ordination of several European collection centres for 1 year (France, Germany, Czech Republic, Poland)

2004 - CONTACT NET Participated in:
- Project preparation for the 2nd year auction
- Set up of the data collection centre for an experimental 3 months timeframe in Romania
- Project coordination in Romania

2005 - CONTACT NET Participated in:
- Project preparation for the 3rd year auction
- Set up of the data collection centre in Russia
- Project coordination for 1 year in Russia

CONTACT NET is further undergoing the market assessment and specific national conditions evaluation for the extension of the project in new Asian and Arabian countries.

Poland, Varsaw

Russia, St. Petersburg

Romania, Bucharest

Romania, Bucharest

Russia,
St. Petersburg

IOSSPL

Integrated Open-Source System for Public Libraries Automation
http://www.iosspl.org/

IOSSPL is an RTD project in the area of Public Libraries Automation and Integration.

CONTACT NET has gained an international projects contest launched by the Italian government, the Ministry of Productive Activities, under the framework of the Italian Law 212/1992, in October 2003.

The official launching of the IOSSPL project was on June 1st, 2004.

The Ministry of Productive Activities, by the General Direction for the Promotion of Exchanges - Division IV - ROMA, approved, by the Decree of the Ministry of Productive Activities issued on 29/12/2004, the IOSSPL Project (cod 212/03/ROM15) to be financially sustained under the Law 212/92 D.M. n. 171 from 19/04/2001.

CONTACT NET involvement:
- Project preparation for the European projects contest
- Project coordination for 2 years timeframe

> "The ELAG - European Library Automation Group is happy to support the «Integrated Open-Source System for Public Libraries in Romania» project. […] We are convinced that it is a project of interest not only for Romanian libraries. We are sure that - if successful - the resulting system will be largely used in Europe. Beside, the fact that it is open source will allow its further development and refinement in the next years."
>
> Paula Goossens
> President of ELAG
> Brussels, June 2003

The project is planned to be continued on a Europe-wide scale, in collaboration with ELAG (European Library Automation Group), CONTACT NET providing the software, implementation services, localization and customization.

The Italian partner for the IOSSPL Project is PROGETTO SOFTWARE (Ragusa, Italy).

IOSSPL Background and Motivation:

The IOSSPL Project comes as complementary to "The National Program for the Automation and Development of Public Libraries Services in Romania"

It is of national importance, in Romania, the Automation of the operations and services of those public libraries which do not dispose of informational specialized systems at prezent, nor of financial resources for such development, with the final goal to enter the application frame of the "National Program for the Automation and Development of Public Libraries Services in Romania", under its both components: the National Virtual Library of Romania (full-text database) and the Shared National Catalogue.

The main draw-back against the complete achievement of the national program:

- The application framework of the "National Program for the Automation and Development of Public Libraries Services in Romania" is dramatically limited because very few public libraries can be connected to The Shared National Catalogue (the collective catalogue meant to basically reunite the online catalogues of all public libraries in Romania), not using automated information systems and electronic catalogues.

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"The project under discussion is of great interest to the Romanian libraries, in their effort to offer the citizen the best access to the rich information they collect, to fulfill their part in the information society and to play a more important role in consolidating the democratic society, thus contributing to accession of Romania to European Union."

Acad. Razvan Teodorescu
Minister of Culture and Religious Affairs
Bucharest, July 2003

- Ministry of Culture and Religious Affairs, Romania, Romania beneficiary
- Consulting from: ELAG (European Library Automation Group)

Places to develop the initiative:
- Bucharest - CONTACT NET, CIMEC
- Deva (County Hunedoara) - County Library "O.Densuianu"
- Slobozia (County Ialomita) - County Library "Stefan Banulescu"
- Tandarei (County Ialomita) - Town Library Tandarei
- Tecuci (County Galati) - Municipal Library "Stefan Petica"
- Liesti (County Galati) - Village Library Galati

- The other program component - The National Virtual Library of Romania (full-text database) is even more difficult to achieve at the national scale, considering that most of the public libraries are functioning based on "paper".

IOSSPL Objectives:

The IOSSPL Project proposes to develop a complete web-based, standards-compliant, open-source library software system which will become available to be implemented in all the public libraries in Romania in the long run.

The IOSSPL system will be first implemented in 5 Pilot-Libraries in Romania. The Installation Kit, the Technical Documentation and the User Guide will be made available to the Ministry of Cultures and Religious Affairs, in order to be further offered free of charge to all the interested libraries in Romania.

The IOSSPL Project will also ensure the technical formation of the representatives of the Public Libraries in Romania (200 librarians and 40 metodists from the public libraries system will be trained for the PC utilization, and further in the field of Bibliologic Information Technology and applications).

Parties involved in the project:
- CONTACT NET Ltd Bucharest, project coordinator, Romanian promoter
- PROGETO SOFTWARE Ragusa, Italy, Italian promoter
- CIMEC - The Institute for Cultural Memory of the Ministry of Culture and Religious Affairs, Romania, Romanian partner
- County Library "Ovid Densusianu" Hunedoara, Deva (Public Regional Administration), Romanian partner

IOSSPL
IBLA Soft

Emil Mieilica,
product manager

IOSSPL Project - IBLA Soft

Under the framework of the IOSSPL Project, an Open Source Software – IBLA Soft – has been developed to assist the activity of public libraries in 42 counties in Romania based on the merging of advanced emerging technologies for enterprise applications: OSS, JSR 168, GRID, J2SEE, JSF, Facelets, ORM, IOC, FRBR and OPAC.

General description

This project aimed at producing a high quality, low total cost of ownership (TCO) solution to be deployed on a national scale in public libraries, which would meet the needs of most small and medium organizations.

During the initial user requirements analysis phase we concluded that specifications clearly indicated towards a web based solution able to scale both horizontally (to accommodate more user requests) and vertically (to integrate more organizations in a cooperative environment).

A Powerful administration portlet allows the configuration of any aspect of the portal from within the GUI.

Administrators can assign user to groups and monitor their activity

With the click of a button you can switch the language for the whole GUI

By examining the open source software (OSS) community we have concluded that the best approach was to use a portal framework. Although portal-like environments have been in production for many years, a standard has been recently developed by the JSR process community – JSR 168 – standard supported by many large software companies like Sun, IBM, BEA and the OSS community. This approach requires a portal framework (a software application based on standard J2EE enterprise technology) to be deployed on the server machine, and independent components also known as portlets (that are themselves J2EE conforming applications) to be published. The main advantage of this approach is that portlets can be developed independently and deployed in a highly configurable fashion on the portal.

IOSSPL Portal structure

User functional requirement analysis has led to a set of portlets being developed. Each of these portlets employs an emergent technology from J2SEE community that allows rapid deployment of rich graphical user interfaces with multilingual support built in.

- Catalog Search portlet
- Catalog Management portlet
- Assets Management portlet
- Loaning portlet
- Community Forum portlet
- Community Wiki portlet
- Community Messages portlet
- Generic Content portlet
- News portlet
- Administration portlet

An extensive toolset has been developed to allow the administration from within the portal of any aspect pertaining to its functioning. A complex organization model allows for fine grained security settings. This power is mastered by administrators from within the portal.

The operation of the library revolves around its catalog and the most important use case is the search. We have developed a powerful search engine that is able to respond to queries of arbitrary complexion whilst providing a very simple and intuitive interface that any user that has ever accessed the internet, feels very comfortable with. Although this interface is suitable for "Average Joe" type of queries (and for someone who knows the syntax of the query string it is more than enough), a more complicated interface is provided for those specific searches.

Once an entity has been identified by the query it can be displayed to the user or modified by the librarian. You might have noticed that I used the term entity and not book or item. This is because our catalogue does not store just the attributes of an item, but also the relationship between items and 3 more level of abstraction above it.

This approach is guided by the specification of a library standard named FRBR which stands for Functional Requirements for Bibliographic Records. The librarian community seems to think, and for a good reason, that this standard is the greatest invention since the proverbial sliced bread.

The FRBR specification is greatly influenced by the design of the WWW that has proved a tremendous success. It defines several types of entities and the relationships between them. This allows for multiple levels of abstraction in dealing with bibliographic entities. For example it defines the entities Work, Expression, Manifestation and Item in descending order of abstraction and it is worth noticing that a physical copy of a book stands at the Item level, while the other levels are related (in reverse order) with a specific edition, a particular expression (e.g. a novel, a play, a movie), and finally with the abstract concept behind a book (e.g. Romeo and Juliet – no matter if it's the original manuscript or a movie staring Leonardo DiCaprio). These entities are represented by XML documents and are stored in a database together with the relationships that tie them. A user is able to navigate this web of relationships in order to find relevant information.

Because of the semantic nature of the information stored, a great emphasis is placed on the correct input of relevant information.

To aid the librarian in its work a wizard-like interface has been developed with the purpose of simplifying the task to such a degree that it is hard to enter invalid data or to forget to enter it.

By requiring the user to enter a small amount of information at a time we keep him focused on the task at hand and hopefully this method eliminates any inconsistencies.

Wizard first step: Select what needs creating

Wizard second step: Fill a subset of attributes

The Asset Management portlet facilitates operations such as keeping the library inventory, from acquisitions, items entry into the library inventory, items allocation to different library sections, to the final item outflow from the library inventory.

The Loans portlet facilitates the management of the loans by the librarians, as well as reservation operations that can be performed both onsite by the librarian, and on-line by the registered customers of the library. For such on-line customers operations, authentication is required.

IOSSPL
EVENTS

IOSSPL Events

The main events of the project were the launching and the finalization events. During the project development some other events were organized, and we have also ensured presence and communications to international and national conferences, seminaries, and professional meetings in the field of library automation, including the annual ELAG meetings and conferences in 2004, 2005, and 2006.

The finalization of the project was realized with the participation of all the partners, and was organized in synergy with the participation to the ELAG 2006 international conference, the annual conference of the European Library Automation Group, this year focused on the theme "New tools and new library practices" (http://www.cimec.ro/elag/).

ELAG, the European Library Automation Group, brings together once a year people involved in library automation in the leading European libraries and information centres. The organization counts 450 members in 27 countries all over

Europe. The annual meetings aim at in depth discussions of particular library automation topics and at the promotion of informal exchange of ideas and experience.

We have presented the project and the system to the international audience attending the conference by exposing the system at the IOSSPL stand, by live demonstrations and technical discussions with the library specialists from several countries as well as local experts.

Communication activities were performed during the event, discussions with the mass-media representatives and software demonstrations.

During the ELAG 2006 conference we have also discussed the opportunity to establish synergies with international projects under way in the libraries automation and integration field. IBLA Soft is intended to be further involved in international R&D projects with Italian and Romanian participation, with the aim to extend the system in some innovative directions and to establish scientific collaborations with research teams from different fields and different countries.

There is also high potential for further addressing the Educational Libraries environment, independently as well as under the framework of the educational development projects. Further to the presence and presentation at the ELAG 2006 conference, and following our mas-maedia communication, we have received several expressions of interest from Educational Libraries and Institutions that would like to be included in the wider initiative that will naturally continue the IOSSPL project, together with the Public Libraries. The Educational Libraries representatives will contribute to the new analysis process for the identification of the particular requirements for adjusting and customizing the IBLA Soft core system to the particularities of the libraries in the educational field, to the testing of the system, professional formation of the personnel, and potential collaborations in R&D future projects.

Moreover, the successful finalization of the IOSSPL project was highly welcomed as valuable support for other national programmes under way. A new synergy was extablished between the national cultural programme and the national Knowledge Economy Programme coordinated by the Ministry of IT and Communications. CONTACT NET being a consultant to the Knowledge

Economy Programme, we ensure a point of convergence and we are prepared to participate to the extension of the IOSSPL system in new areas of application, in synergy with both national programmes, within the wider goal to promote the Information Society in Romania.

IOSSPL PROFESSIONAL FORMATION

IOSSPL Professional Formation

Activities for the professional formation of the Public Libraries representatives in Romania were performed at several stages during the project and covered different areas of interest, thus responding to the requirements of various cathegories of public libraries personnel. The National Associations of Public Libraries and the National Commission for the Automation of Public Libraries were highly supportive during this phase of the project.

The first module of the professional formation was a preparatory stage providing training on the basic PC utilization (MS Windows XP and MS Office XP), with a focus on database utilisation (MS Access DB). The second and third modules were focused on the topical theme of library information and automation systems and the new library standards, as well as the practical utilisation of the new library software system created by the IOSSPL project.

The obstacle initially brought by the "inertia" of some library personnel in their professional views, not being immediately open to change and innovation or finding it difficult to accommodate to the impact of a new generation library system on their activity practices and processes, was soon counteracted by the clear explanation of the benefits of integrating library services and making them largely (and still securely) available as web-based services. Moreover, the uniformization requirement in some professional practices was understood as a potential enabler for large-scale integration, as well the substantial benefits on the simplification of daily library activities that can be brought by the libraries automation and integration process, along with the alignment to the new library standards.

The solution we found to the lack of uniformity and the confusion regarding various library automatic activity chains and workflows was mainly to discuss with the experts from the National Commission for the Automation of Public Libraries about the necessity to provide some guidelines and reccommendations for the uniformization of the library practices and processes, regarding both the informational and the activity flows. We further followed the guidelines provided by the experts during this specific professional formation phase and will continue to collaborate on extending the libraries automation and integration initiative on a larger scale, both at the technical consulting and professional formation levels, after the project finalization.

Among other new developments and various innovative trends recently promoted within the automation libraries international environment, the FRBR Cataloguing standard was introduces

and explained - which is the new standard for the Functional Requirements for Bibliographic Records. FRBR defines entities and relationships and allows multiple levels of abstraction regarding bibliographic entities, and proposes to integrate the bibliographic records framework of various cultural fields, such as the libraries` and the museums` cataloguing systems. Even if FRBR proved to be difficult to understand, as it introduces new terms and terminology substantially different from the terms previously used in the cataloguing practice, the new standard was easier accepted when presented through a comparative maching guide between the long-used ISBD terminology and the new FRBR terminology. This approach facilitated the librarians` understanding of the terminology and the acceptance of the benefits brought by the recent FRBR implementation.

Finally, the new approach of a library automatic system in the form of a web portal was also introduced and explained, so that the libraries` personnel attending the courses became aware of the benefits of the portal technology and the

were also performed on-site training activities at the location of all the public libraries nominated as pilot libraries in the IOSSPL project, during the implementation phase of the project. The utilization and administration procedures implemented by the new library system were presented to the libraries` personnel and the local library employees were particularly trained on how to fulfill their specific activities by the help of the IOSSPL system.

Galați-Liești

Galați-Tecuci

Ialomita-Tandarei

supperior integration facilities that it provided to the library system modules and functions. The administration of the library user groups and accounts, with specific permissions and profiles, the entire security system, as well as the content management facilities, became therefore accessible and understandable to the library personnel as user-friendly features, entirely web-based and using open-source technologies.

On-site Training at the Pilot Public Libraries
Besides the professional formation modules tailored for different levels and topics of interest during the professional formation phase, there

Ialomita-Slobozia

IOSSPL OFFICIAL VISITS

Official Visits
Italian-Romanian Cooperation

The delegation of the Italian Ministry of Productive Activities (MAP) has visited the Romanian libraries - part of the pilot public libraries in the IOSSPL project - in order to obtain a closer view on the libraries activity and the practical integration of the IOSSPL system - IBLA Soft - within the daily informational workflows.

We have welcomed the official representatives of the Italian ministry and presented to them the implementation of IBLA Soft at the pilot libraries, as well as the integration of library activities, workflows, catalogue administration and asset management functions between different libraries interconnected by vertical or horizontal hierarchic relationships.

We have organized meetings at the local mayoralties in order to discuss with the Mayor and the authorities of the local communities about the aspects of the public library integration within the community cultural and educational environment.

By following this approach the library functions become interconnected with the administrative functions conducted by the mayoralty and the local council, with the educational institutions and other cultural institutions operating in the local community, for a coherent and efficient cultural development and synergy.

It can also ensure the web-integration of all the major institutions in the local community under the same web interface - the Gateway of the local community within the national web space.

We also organized meetings at the Ministry of Culture and Religious Affairs for discussing the integration of the IOSSPL initiative within The National Program for the Automation and Development of Public Libraries Services in Romania.

We also discussed the possibility of the continuation of the project to include new communities and new libraries in the next stage of the implementation process.

The consultations with the technical experts delegated by the Italian ministry (MAP) continued on-site for assessing the current implementations and the possibility of further development.

We had an exchange of opinion and expertise with the Italian experts regarding the next steps that could continue the IOSS-PL research and development work-plan, with several new R&D directions such as: the development of the open-source system to provide mobile services and mobile payments for library services and digital content, as well as the integration of advanced facilities for visually impaired persons to access the library portal (adaptable multi-modal interfaces).

Another direction of development is the integration of an advanced Workflow Management system - Triana open-source software environment - for facilitating the automatic remote updates and technical support on a large scale.

"Software free of charge for the libraries... The public libraries will benefit on a free of charge basis of a software system which allows books cataloguing and assets management, due to a project realized with Italian funding. The IOSSPL project - Integrated Open Source System for Public Libraries was launched by CIMEC and the Contact Net company."
CHIP Magazine
June 2006

"Iosspl.org... Project proposes to develop a complete web-based, standards-compliant, open-source library software system which will become available to be implemented in all the public libraries in Romania..."
worldwidirectory

http://www.worldwidirectory.com/Europe/Romania/
/Education.and.Reference/Libraries/

IOSSAC PROJECT

IOSSAC Project
Integrated Software Platform for Juridical Libraries

Participation in the Development Programme for Modernizing the Libraries of the Romanian Courts of Appeal, within the framework of the Transparency Phare Project

The implementation of the IOSSAC open-source library system, based on the customization and further development of the IBLA Soft integrated platform for **Modernizing the Libraries of the Romanian Courts of Appeal**, was part of the **Phare Project** – "Transparency of the legal act" – the project beneficiary being the **Superior Council of Magistracy** . The necessity of such modernization was identified by the international experts nominated by the Centre for European Constitutional Law (CECL) (Greece), Human Dynamics (Austria) and the Foundation for Development of Civil Society (Romania).

"Today, the overwhelming majority of library automation software is offered through commercial companies as proprietary software. Open source software contrasts with the closed software.[…] Based on what we now know, the recommended solution for the first common automated system of the libraries of the Romanian Courts of Appeal is integrated open source system IBLA Soft. There is need to keep up the compatibility, versatility, transferability, standard and quality. IBLA Soft system has many years' history of determined development particularly for Romanian libraries […] a level headed solution for the libraries of the Romanian Courts of Appeal of today."

International Senior Short Term Expert
Sinikka Kangas
Transparency Project

The pilot project for the automation, optimization and modernization of the Romanian Courts of Appeal by the implementation of the customised version of the IBLA Soft open-source platform provided a series of advantages, both regarding the costs of customization and implementation of the library system at the level of the Romanian Courts of Appeal, as regarding the future perspectives offered to the beneficiaries by such system, such as the possibility to disposes of the source cod and participate in the open-source community developed around the IblaSoft platform, the

support of this community formed of software specialists as well as librarians with significant expertise in the library services field, the benefits of preferential assistance and technical support, as well as future periodical updates of the software system.

"At the present, libraries need external assistance to reach the technically adequate level for installing, operating, and supporting the information system."

International Senior Short Term Expert
Sinikka Kangas
Transparency Project

Building Communities around Libraries on the Web

"You'd have to live on another planet not to know that a fundamental shift has happened on the web. It's no longer only about serving up pages of static content but also about engagement, community, and participation. Librarians are just beginning to find ways to make their web presence more community-oriented."

Marshall Breeding,
Content, Community and Visibility: a winning combination;
Computers in Libraries, April 2008

The pilot implementations of the customized IblaSoft platform, following the requirements analysis completed at the level of the pilot Courts of Appeal in Romania (Bucharest, Cluj and Iasi), allowed the option of using the system in one of the following alternative implementation modes:

1. Implementation at the central server level, and system exploitation by all the Courts of Appeal in Romania via intranet or internet connection. The benefits of this **community-oriented** implementation option are mainly related to the possibility of creating and using a common shared library catalogue, community building of specialised juridical librarians around the integrated system on the Web, the engagement, participation and collaboration optimization among the documentarist court clerks based at the different Courts of Appeal, as well as the common exploitation of the extended system resources (e.g., forum, wiki, etc.).

2. Implementation at the local level, providing the alternative option of each Court of Appeal managing its own server and performing local activities on the local server, whether the individual institutions preferred more independency in exploitation, handling security and maintenance aspects without affecting the other library locations in the system.

Testing and validation of the pilot implementation:

> "The information specialists of the Court Libraries have preliminarily evaluated the IBLA Soft system.[...] It is vital that the system is capable to offer the required features, scalability and reliability. Test database and demonstration of skills would function as documented evidence on the merits of the IBLA system."
>
> International Senior Short Term Expert
> Sinikka Kangas
> Transparency Project

The implementation was completed in parallel with on-going tests conducted with the participation of the library professionals from all the Romanian Courts of Appeal involved in the project. The feedback gathered from the multiple users were rigorously analysed and considered during all phases of the customisation, implementation, testing, and demonstration, towards the final validation of the library software platform.

> "Development activities supported by the Transparency Project have contributed to positive progress in the field of information storage and retrieval.[...] New channels of communication between the experts have been opened at national and international level. Essential to the success was that the 2008 Transparency Project found an excellent local expert with good communication network and potential for training."
>
> International Senior Short Term Expert
> Sinikka Kangas
> Transparency Project

Personnel Training at the Romanian Courts of Appeal Libraries:

In addition to the automation and optimization of the libraries activities, the project involved the training and professional formation of the personnel at the Romanian Courts of Appeal to use the specialized library services, automated operations and information flows, and the benefits of the web-based community services. The documentarist court clerks from all the Romanian Courts of Appeal involved in the project participated in the seminaries and workshops organized at the Training Center for the Magistrates in Sovata and benefitted from specialized training in the utilization of the IBLA Soft library system, as well as broader aspects such as the novel approach in documenting, European trends in the field of library services, practical views and guidelines for the alignment with the professional standards of the European librarians.

As final remarks regarding the long-term approach and continual modernization of the juridical libraries information systems, Mrs. Sinikka Kangas, Senior Expert, and Mr. Iosif Biro, Junior Expert, have underlined the suggestions for potential new ways of development in the framework of the collaboration between the Romanian Courts of Appeal and the IBLA Soft team at CONTACT NET.

BiblioPortal

BiblioPortal
Integrated Web-based Library System

BiblioPortal (**www.biblioportal.ro/portal**) was launched on 21st of October 2009 - **Integrated Web-based Library System** that

loguing operations, complex search in the catalogue, assets management operations, standard reports system, online reservations, loans, secured portal administration and preferential access to services, internationalization module (the portal is currently localised in 7 European languages). The portal facilitates inter-library collaboration and allows direct communication through the BiblioPortal forum and wiki.

BiblioPortal ensures the preservation of the libraries' individuality by creating the group culture and customized interfaces enabled by the login with the group credential. Each subscribing library may access the portal in two alternative modes of operation: in **open mode**, common to all visitors, allowing access to the common Shared Catalogue and enabling complex search by a range of criteria, as well as browsing the news sections;

comprises a series of automatic library applications offered as online services to the group of libraries subscribed to the portal, to their branches and their clients. BiblioPortal provides hosting services to the subscribing libraries, enabling the complete integration of the libraries' catalogues within the common **Shared Catalogue** as well as their presentation websites. The libraries' personnel may operate the portal on the basis of preferential secured access, according to the user accounts and profiles created for them in the administration module. The portal was developed based on the previous open-source version IblaSoft (**www.iblasoft.contact-net.ro/portal**) - the product of the IOSSPL project (**www.iosspl.org**) - following the web development strategy of CONTACT NET in the field of library software systems.

The Integrated Web-based Library System covers the entire range of operations and information flows that take place in a professional library. The portal enables complex library operations through specialized portlets in the following categories: shared catalogue, cata-

and in **preferential mode**, by secure login to the reserved library's space in the portal, which allows all library personnel to perform their daily activities and complete specific tasks according to the profiles and rights granted for the permitted operations: the *'cataloguing profile', 'assets management profile', 'loans profile', 'administrator profile'*, etc. There is also a *'reader profile'* that allows the readers to hold web-based reader accounts to the subscribing libraries in the portal, enabling online reservation and keeping track of the loans history and alerts, in direct communication with the librarians.

BiblioPortal allows customization for enabling all specific functions required by various types of specialized libraries, and the integration of a virtually unlimited number of libraries. The portal is involved in several national and international projects, the current implementations covering several categories of libraries: Public Libraries (Town, Municipal, Village Libraries), Juridical Libraries (Courts of Law, Appeal Courts), Research Institutes Libraries, Educational Libraries.

BiblioPortal is developed on Java portal platform, it runs under Centos server, and uses the following main technologies and methodologies: OSS, JSR 168, GRID, J2EE, JSF, ORM, IOC, Hiberante, Spring Framework, Jaspersoft, eXo Platform.

Based on the original IblaSoft platform, the new BiblioPortal system benefits from a restructured architecture providing a cataloguing module that was migrated from the FRBR principles to the ISBD standard. The search engine has been also extended to allow multiple searches based on the ISBN/ISSN features, advanced search criteria, as well as navigation between connected entities. We have further developed a novel system for diferrentiated access to the main titles based on customised librarian-defined protocols. BiblioPortal made available the electronic books cataloguing and visualization module. BiblioPortal also introduced the Bar Cod identification module for the library items and library subscribers ID. We have introduced the on-line reservations module open for use to all library subscribers. We have also developed a new real time monitoring system for notifying the return delays, providing web-based visibility to both the library personnel and the notified subscribers. Last but not the least, BiblioPortal introduced the new reporting system based on the open-source JasperSoft platform, allowing the librarians to print out complex reports and statistics on the library cataloguing activities, assets management, loaning history, and library items files. Based on the new developments and modules introduced, as well as the ergonomic design, BiblioPortal has become one of the most advanced library software systems available on the market.

BiblioPortal

for Juridic Libraries (2010)

At the end of 2010, on the occassion of the finalisation of the advanced **BiblioPortal** integrated software platform, CONTACT NET has upgraded the initial IblaSoft library system at the Romanian Courts of Appeal with the new platform BiblioPortal, in line with the final objectives of the IOSSAC project for long-term collaboration and continual modernization of the library services, formulated at the finalization of the **Transparency Phare Project**.

IOSS-RS

A new research project was initiated in 2007, for bringing the IBLA Soft library platform to the next level. The collaboration between CONTACT NET and the **National Institute for Research and Development in Mine Safety and Protection to Explosion INCD INSEMEX** (Petrosani) occassioned a new stage in research and requirements analysis in the view of developing and customising the library integrated platform for the specific requirements of a research institution and environment. The project was finalized with the implementation of the customised software system at the INSEMEX Institute.

In 2009, our R&D activities continued with a new collaboration project – the modernization and optimisation of the specialised library services at the **National Institute for R&D in Electrical Engineering ICPE-CA** (Bucharest). The project was structured in several phases and the implementation was finalized in January 2010, followed by a long-term post-project collaboration for consulting, mentenance, and technical support. The national ICPE-CA institute fully exploits the library portal at present, using a 10,000 library items database, 8,000 electronic books, and integrated web services for library assets management, operation and information flows.

Based on the new developments and novel modules and services resulted from the research activities of CONTACT NET and the collaboration projects fulfilled, the advanced **BiblioPortal** library software platform was born.

BiblioPortal

for Educational Libraries (2011)

CONTACT NET has set a new challenging target for 2011 – the launch of the educational version of the library portal BiblioPortal namely the specialized software system for the school and high-school libraries automation, based on the BiblioPortal system.

Under the framework of a wide-scale partnership with the Bucharest General Inspectorate for Education, we have projected a pilot project to include schools and high-schools from all districts of Bucharest, as partners and participants in the project.

Projects Portofolio GFP

GFP Governmental Project
Consulting services

In 2004 we have been selected as official consulting providers for the World Bank-funded Governmental programme GFP - Grant Facility Programme - the national-scale award of grants following the publication of several Calls for Proposals under the general goals of the Knowledge Economy National Project. We have provided Consulting services to the Ministries involved and worked out the mechanism, the procedures and the methodology required for the Calls for Proposals organizing, the Application process and packages, Eligibility & Administrative Compliance guidelines, Evaluation & Selection criteria and procedures, Coordination & Supervision mechanism, Uniform Reporting Guidelines, Monitoring & Impact Assessment Process for the entire GFP Programme, as well as an outline of the Information & Dissemination Plan.

The Grant Facility Programme - GFP - will have as object the national-scale award of grants, following the publication of several Calls for

Proposals, according to the general goals of the Knowledge Economy National Project and the specific objectives set for each target-group addressed.

For the preparation of the Grant Facility Programme launch we have provided Consulting services to the Ministries involved and worked out the mechanism, the procedures and the methodology required for the development, coordination, monitoring and assessment of the GFP Programme, as well as an outline of the Information and Dissemination Plan.

The Programme is planned so that the Objectives, the Results and the Impact Assessment Indicators are correlated and coherently defined, and the effectiveness of the project at large can be monitored and assessed in an objective manner.

In accordance with the specificities of the programme, we have worked out the appropriate procedures for the Calls for Proposals, the Application process, as well as the Templates to be filled in by the Applicants from each Target-group in order to complete the Proposal Application package.

GFP - Project Meeting, November 2005

Further, the "Eligibility and Administrative Compliance" Report Guidelines we propose covers the general and specific rules for Eligibility and Administrative Compliance, as well as the Eligibility Criteria for the Grant Facility Programme. The Target-groups were defined based on the Grant Facility Programme requirements and the general strategy set for the programme procedures.

We have drawn up the "Guidelines for Evaluation and Selection", covering the Selection Mechanism, Selection Criteria and Selection Committee, as well as the Supervision Mechanism for the selection of beneficiaries.

The guidelines provide the necessary indications for the general principles to be followed in the evaluation of proposals, the evaluation process and the procedures in practical detail, the eligibility and administrative compliance criteria, the evaluation and selection criteria, and the evaluation forms needed to be completed at each step of the evaluation of proposals.

The Monitoring and Impact Assessment Processes were further outlined so that to cover the specific function of Monitoring the projects and activities within the framework of the Matching Grant Facility Programme, as well as the function of Assessing the Impact of the projects results and the level of achievement of the objectives set.

We have worked out the Monitoring Methodology and Uniform Reporting Guidelines, providing the required specific details for the preparation of Project Reports with the main purpose to allow the monitoring of the progress of the contracts against the stated objectives.

The specific requirements for Impact Assessment, the Impact Assessment Methodology, as well as the appropriate set of Indicators that should be calculated and tracked, in direct correlation with the Objectives set for the Programme and for the specific Target-groups.

The Impact Assessment Plan - providing the ex ante, intermediate and ex post evaluation aspects - offered the guidelines for Individual & Aggregate impact studies and analyses, periodical assessment steps and POSSIBLE OUTLINE INDICATORS, based on the most appropriate programme-related & project specific sets of indicators proposed and the principles of EFFICIENT and EFFECTIVE programme implementation.

"Knowledge Economy" and
The Libraries Automation

A new synergy was recently extablished between the national cultural programme in the field of Public Libraries Automation and the national Knowledge Economy Programme coordinated by the Ministry of IT and Communications. In these circumstances, the successful finalization of the IOSSPL project was highly welcomed as valuable support for both national programmes under way.

CONTACT NET being a consultant to the Knowledge Economy Programme, for the component Grant Facility Programme (GFP), we ensure a point of convergence and we are prepared to participate further to the extension of the IOSSPL area of application and the synergy with national programmes, within the wider goals to promote the Information Society development in Romania.

As a first step, we have provided the open-source library system developed under the IOSSPL project (IBLA Soft) to the public libraries from the local communities involved as initial pilot communities in the Knowledge Economy Programme. Training and professional formation support will be provided further, as the system becomes operable and integrated within the libraries activity and informational flows.

Educational and ONG Libraries:

We further assessed that there was also high potential for approaching the Educational Libraries environment, under a specialized educational development project. Therefore, the usage of the library software is currently extended to support the Educational Libraries environment.

Our analysts are currently conducting the requirements analysis activities for providing the new system specifications to meeting the specific needs of the educational libraries.

Since the finalisation of the IOSSPL pilot project, the solicitations to implement the open-source library system came from a large number of libraries of different types - new public libraries, educational libraries, ONG libraries and religious organizations libraries. R&D activities are therefore under way for meeting their specific needs and requirements.

Parapsychology Research and
Energetic-Informational Actions

Our extensive Parapsychology research activities cover a wide range of PSI phenomena and Energetic-Informational Actions, which we approach in a synergistic way involving knowledge and expertise from both scientific fields and traditional fields, as well as practical experience. Our studies and experiments go in-depth into Parapsychological concepts and phenomena, but also attempt to identify inter-connections and provide a holistic approach to our research.

Moreover, by integrating scientific knowledge and objective measurements into our studies as well, we aim to support Life Sciences to make a new step ahead and approach the living systems "beyond the physical body" in direct synergy with the physiologic studies. We aim to deepen the synergy with disciplines such as Neurosciences and Biomedical Informatics that promote the vertical nano-micro-macro data integration and the reconstruction of the Virtual Physiological Human by multilevel modelling and simulation of the human anatomy and physiology.

The main topics of our Parapsychology research activity involve:

- **ESP - Extrasensory perceptions**, including the entire spectrum of phenomena that fall into the category of ESP (telepathy, clairvoyance and precognition), which basically imply the acquisition of information about, or response to, an external event, object or influence (mental or physical; past, present or future) otherwise than through any of the known sensory channels (sight, hearing, touch, smell, and taste).

- **DMILS - Direct Mental Interaction with Living Systems**, at both cognitive and physiological levels, with a major research interest on the emotional (empathic) level. While DMILS experiments usually attempt to find out if one person can influence the physiology of another distant individual through mental intention, we are further concerned with the DMILS processes that take place without involving the "intention" factor, which leads to the discussion on how we affect people around with our thoughts, emotions, desires, and intentions, in a conscious or unconscious way. Our studies and experiments on DMILS are also concerned with the integra-

tion of the cognitive, emotional, and physiological levels during the DMILS experimentation, with all the facilities and environmental factors involved, which implies the monitoring and the analysis of physiological measurements as well as cognitive and emotional perceptions during the DMILS process.

- **OBE - Out-of-Body Experiences**, a phenomenon we have researched on extensively - from both the practical experimentation and the theoretical study points of view. In our OBE studies and experiments we attempt to provide a scientific explanation of the OBE phenomenon, as well as to provide an explanation on the factors that lead to spontaneous (involuntary) OBE, the factors that make certain individuals more inclined towards spontaneous (involuntary) OBE, and the methods that can lead to voluntary controlled OBE.

- **Local vs. Non-local Consciousness**, studying the concepts in relation to the paranormal phenomena in which they occur - such as "remote viewing" vs. "out-of-body experiences".

- **Superior states of consciousness**, including research on super-mental activity and ESP perceptions, and the study of super-conscious persons that are believed to have a "higher level of consciousness" and to be "more evolved" at the mental and consciousness level.

- **Psychosomatic influences**, the influence of the mental on the physiologic body functions and the consideration of the duality mind-brain.

- **Brain activity in relation to ESP**, which involves the brain hemispheres activity (left/right) and the effects of the brain hemispheres balancing/synchronisation, the effects of the alternative brain stimulation, the brain waves and the brain frequencies modifications during the experiments and during persistent long-run training in meditation and relaxation techniques. We are closely collaborating with the AIM group in these studies, involving the utilization of their devises such as the Mind Synergy brain-machine.

- **Endocrinal system in relation to ESP**, which involves the study of the Ayurvedic teachings that affirm that chakras act as bridges between the physical body and the psychic, influencing the endocrine glands as well as certain body organs, namely that the mental and the spirit of a person directly influence the chakras, and further the chakras influence the endocrine glands. We are mainly concerned with the study of the pituitary gland (hypophyse) in relation with the mental activity and ESP perceptions such as telepathy and clairvoyance (mental ESP), and the thymus gland in relation with the affective states and ESP perceptions such as empathy (emotional ESP).

- **Alternative Therapies and the processes involved, in a Holistic approach**, as well as the Ayurvedic traditional medicine concepts. Our studies also aim to create a synergy with the modern medicine concepts and integrate the information within a larger framework that extends research on the physical body to an approach "beyond the physical body", as well.

- **Traditional Yoga & Tao concepts**, such as the Subtle Bodies (etheric, astral, mental, causal), Chakras (subtle energy centres), Nadi / Meridians (subtle invisible energetic channels), Prana (subtle energy), Bioenergetic Aura visualization/simulation and the traditional interpretations, in relation to the modern medicine and the scientific concepts involved.

- **Energy remote transfer**, with its transmission/reception pair-factor and the aspects regarding the characteristics of the receptor/transmitter pair-sides, the traditional teachings regarding Yin(-)/Yang(+) polarity and the relation with the brain activity.

- **Kundalini psycho-mental energy**, and the psychical and physiological effects that occur when this energy is "awakened" and ascended towards the upper levels of the body, as well as the Paranormal phenomena and extrasensory perceptions that are considered to be directly related to the awakening and ascending of the Kundalini energy.

Participation in Parapsychology International Conferences and Workshops:

In order to keep up-to-date with the latest results in Parapsychology research and to present our own studies, experimentation results and research interests, we attend and give presentations in international workshops and conferences in the field.

We have actively participated in the discussions of the international Parapsychological Association (PA) on the occasion of the Annual Conventions of the Parapsychological Association, and we keep permanent communication - for exchange of ideas and communication of research results - with Parapsychology researchers from several European and American universities.

Moreover, we are actively involved in consultation workshops and international conferences in the field of Energetic-Informational Actions organized by The National Defense University "CAROL I" and The Ministry of Defense in Romania, creating a common field for close collaboration in present and future research. We have presented our studies on DMILS - Direct Mental Interaction with Living Systems - discussing the concept, providing a new approach on the DMILS process, and communicating the results of our experiments. We have finally brought up the topic of DMILS as a Parapsychological phenomenon in a view to better understand how we affect people around with our thoughts, emotions, desires, and intentions.

We are also participating in workshops and trainings in traditional disciplines and teachings such as Tao, Yoga, Ayurveda, and various types of meditation, workshops in Transpersonal Psychology, NLP (Neuro-Linguistic Programming) and Eneagrama (Human Typologies and Archetypes), as well as international congresses where such traditional knowledge is promoted, communicated and interpreted in such way as to fit the requirements and understanding of a modern society.

Biomedical Data Discovery and
Multimodal Workflows

In collaboration with Cardiff University - School of Computer Science, we have researched into the application of Triana Workflow Environment and the Alchemist P2P infrastructure (which are projects at Cardiff University) in the field of Biomedical research, in support for the composition of complex data workflows, biomedical image and spectral data discovery. The initial use-case is the utilization of the Triana/Alchemist infrastructure in Diabetic Retinopathy research and clinical trials, for the early detection and prevention of retinal disease and investigational drug discovery.

In the Biomedical research field, the Alchemist infrastructure provides an innovative mechanism for biomedical image data search and spectral data discovery, where metadata generated from user and automatic annotations is fused and semantics can be included as part of the query. Biomedical audio-visual content and associated metadata can be discovered and retrieved, allowing also the visualization of particular regions of interest within the images, or anomalies in the patterns of spectral data. While content-based retrieval is an active field of research, multiple modality search (using data from multiple sources and media, and data from different levels of biological organisation) can give deeper insights into the nature of biological entities and the processes they are involved in.

Triana Workflow environment is used for problem solving and orchestrating flows of operations/services, both in fine-grained dataflow applications and as a course-grained distributed workflow system. Workflow is implicit in scientific algorithms that specify a series of inter-dependent operations to be executed, to connecting such algorithms in a series of derivations, which when aggregated perform some higher-level task. Triana - as a scientific workflow environment - has been previously used in Bioinformatics projects as a Grid-based problem-solving environment for collaborative exploration and analysis of global biodiversity patterns.

Within the context of Biomedical sciences, the Alchemist has a significant potential to support (i) distributed biomedical communities focused on a specific disease process (ii) disease-oriented collaborative studies which share large datasets (iii) integrative biology projects that need to analyze inter-related information at different levels (e.g. clinical, cellular, molecular and genomic) (iv) population-based studies (e.g. clinical trials in diabetes or cancer). For biomedical images, current practice usually involves searching databases containing (i) patient data repositories (ii) case-oriented reference atlases (i.e. dynamic information across spatial and temporal scales of abstraction) or (iii) training collections (documented biomedical images, either anonymised individual or averaged data and training datasets).

By using the Alchemist for disease-oriented studies, P2P caching could support the search, selection and aggregation of similar biomedical and spectral datasets. Caching, using rendezvous peers (as in WSPeer), can be adapted to cache similar requests for resources and thus store hits on nodes which are within closer proximity to the particular group of researchers interested in the file.

Mobile Grid and P2P Scenarios for
Biomedical Imaging

We have conducted research activities for identifying scenarios where mobile devices might be appropriate for use in the Biomedical imaging field. We discuss the requirements for connecting mobile nodes with static Grids, which incorporate support for their transient nature and diverse communication protocols and environments, such as peer-to-peer.

We assessed the potential use of workflow management from mobile devices in medical images registration, data management and analysis and the role of mobile devices for the discovery, retrieval of digital images and their interactive visualization.

Mobile support is also provided for the Alchemist infrastructure. Clinicians can benefit greatly from the possibility of using a mobile device to initiate search operations, retrieve medical audio/visual data and associated records, or operate data transfer between different static repositories, in a controlled and secure way.
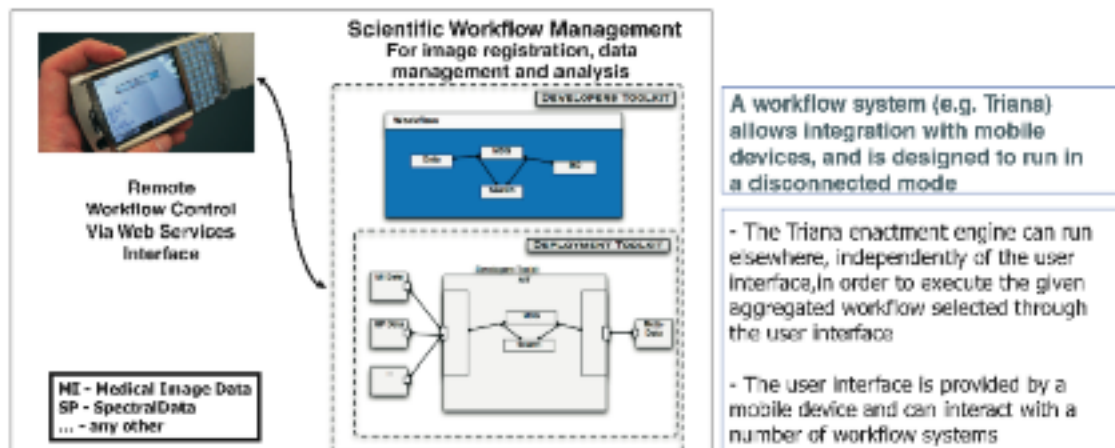
We also addressed the possibility of using mobile devices for workflow management by the remote control of the enactment engine from a mobile user interface, for the data fusion of different kinds of data and metadata and the integration of algorithms designed under a common problem-solving environment.

Mobile Grid and P2P Scenarios for Medical Imaging

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Scientific Workflow Management
For image registration, data management and analysis

Remote Workflow Control Via Web Services Interface

MI - Medical Image Data
SP - SpectralData
... - any other

A workflow system (e.g. Triana) allows integration with mobile devices, and is designed to run in a disconnected mode

- The Triana enactment engine can run elsewhere, independently of the user interface,in order to execute the given aggregated workflow selected through the user interface

- The user interface is provided by a mobile device and can interact with a number of workflow systems
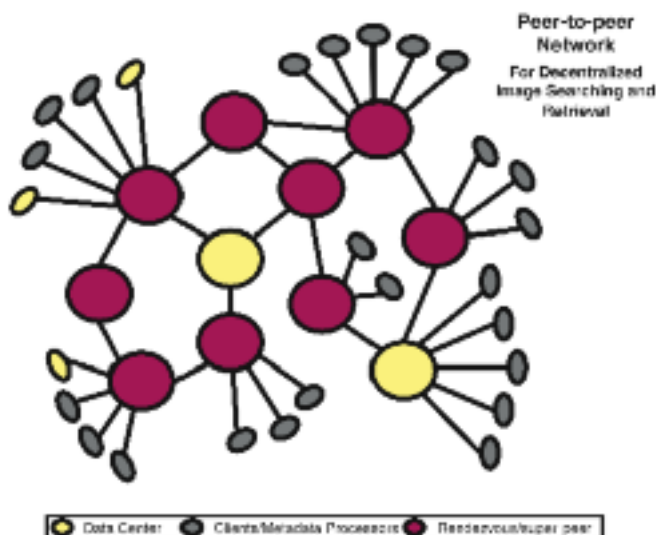
Mobile Support for Image Resources Discovery and Retrieval

- Initiation and control from mobile devices of advanced image search operations (index-based or content-based search)
- Operation of data mining tools on large multi-scale biomedical banks and digital libraries

Discovery of multiple image data sources can be done:

- In centralized fashion i.e. using UDDI or similar
- In decentralized P2P scheme based on searching for WSDL files through a network of peers

P2P Decentralized Search Infrastructure for Medical Images

Peer-to-peer Network

For Decentralized Image Searching and Retrieval

Data Center   Clients/Metadata Processors   Rendezvous/super-peer

The Alchemist infrastructure considers an alternative approach to searching, allowing users to proactively push information into the "search database". The Alchemist is based on a caching Peer-to-Peer (P2P) network that scales with growing demand and has no central point of failure or control. Clients push information (from medical images repositories) onto a set of (dynamically selected) super-peers that collectively form the distributed search database and use idle cycles on the participant's computers to process information and perform search queries. The Alchemist employs transport layer (SSL) and a dynamic public/private key infrastructure for security.

Alchemist provides a P2P overlay coupled with a data fusion workflow environment for the searching or discovery of distributed resources. Built upon Alchemist's base P2P overlay network will be a sophisticated and extensible toolkit that is designed to allow different search algorithms to be plugged-in

Mobile and Static Grid Connectivity Requirements

- Mobile nodes are loosely coupled with the static nodes => true mobility and transient connectivity for mobile entities
- Bridge node architecture: certain static nodes are pre-configured to act as gateway/bridge to the transient mobile devices
  - The bridge nodes store the state of the mobile device during its interaction
  - The mobile node acts as a remote control to the work being coordinated by the bridge node
- Common messaging framework: SOAP supported by OGSA-compliant services integrated using WSRF
- Prototype design around WSPeer => allows hosting and interaction with Web services and WS-RF services within both Grid and ah-doc P2P environments, and the integration of the bridge within the mobile-to-static architecture through the rendezvous peers

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Diabetic Retinopathy Research,

Disease Prevention and
Investigational Drug Discovery

The initial use-case in the field of biomedical research is the utilization of the Alchemist infrastructure in Diabetic Retinopathy research and clinical trials, for the early detection and prevention of retinal disease and investigational drug discovery.

We use the Alchemist to create multimodal diabetic retinopathy workflows, in order to combine data from several distributed resources (horizontal integration) and different biomedical levels (vertical integration) for advanced retinopathy detection and prevention. The development of Alchemist applications relevant to diabetic retinopathy is being guided by expertise within the Diabetic Retinopathy Screening Service for Wales (DRSSW), and the Diabetes Research Unit (DRU, Llandough Hospital) with the School of Optometry and Vision Sciences (SOVS), Cardiff University.

We proposed the study of diabetic retinopathy as a focus for customised utilisation of the Alchemist multimodal search/workflow system - one that spans both fundamental biomedical research and routine clinical (screening) practices. From very large (multi-terabyte) clinical datasets, image and spectral data can be searched to discover biomarkers for disease - in particular markers that are intrinsic to the disease process. Identification of such markers hold immense value for large-scale disease prevention and early detection services.

Disease-intrinsic biomarkers (particularly at the molecular level) also have potential for improved diagnosis and stratification of disease risk at the level of the individual. In consequence, screening systems can trigger earlier interventions and monitor disease progression in a more consistent, quantitative manner. Alchemist has therefore potential to synergise with large-scale screening programmes, and can help explain the interaction of factors that underlie initiation of the disease process. Disease progression data discovery and distributed pattern matching across whole populations has the potential to radically improve efficiency in patient selection, intervention effect evaluation, optimal frequency/cost of screening. However, significant work for applying focused ontologies needs to be done.

Development of workflows that integrate sensitive methods of measuring retinal function (as well as gross pathology) can improve detection of retinal lesions (or better, pre-disease markers) that are associated with retinopathy or vision loss. In an efficient screening service, appearance of such validated markers would constitute important evidence to trigger therapeutic intervention choice(s) while monitoring/recording the outcome(s). Alchemist can also have a key role in assessing (through a novel longitudinal search paradigm) the quantitative impact of a treatment or treatments.

This benefits of the vertical data integration are shown by the data representation at multiple levels that might in combination explain origins of pathology (e.g. clinical, functional, morphological, molecular, cellular, genomic). These explanatory combinations may be represented in workflows by analytical algorithms within data discovery workflows or in decision support tools that allow users to apply discovered knowledge. Patterns and signals from combinations of observational modalities (spectral, electrophysiological, retinopathy gradings and annotations/metadata from expert assessments) can help predict what is commonly observed - at the macroscopic level - as a pathological outcome.

The high dimensional searches enabled by Alchemist also have clear potential here for novel biomarker discovery - i.e. identification of signals, technical effects, risk factors or combinations that directly underlie any observation (either in non-exceptional - i.e. normal - functions or in exceptional - i.e. pathological - functions).

Mobile P2G Architecture for

Paramedical Emergency Operations

In collaboration with Cardiff University - School of Computer Science, we have conducted research for the design of a hybrid framework of Grid and P2P technologies, which we called P2G (Peer-to-Grid), and assessed how such framework could be used to address the issues of a real Paramedical Emergency Scenario, involving complex rescue operations over large geographic areas and high-risk locations.

For meeting the requirements of the Paramedical Emergency Operations, we proposed a distributed architecture that could be used to link emergency medical centres, hospitals, telephone operators, and ambulances into a hybrid Peer-to-Peer (P2P) and Grid system for the sharing of information and transport of data. Distributed computing techniques are used to connect static and mobile systems, bringing the different tools, expertise and databases together to aggregate patient data "on-the-fly" and integrate it into a situation and context-specific patient-centred virtual environment. This scenario encapsulates connecting mobile tools and medical devices from ambulances, enabling data transfer to medical centres, and aggregating patient data from numerous sources.

By combining Grid and P2P systems, an intelligent and context-aware distributed architecture would dramatically increase the amount of information available to paramedical teams as they respond to emergencies, as well as improve information exchange with hospitals, emergency dispatch centres, and doctors. This information would range from patient data such as vital data during the rescue operation, allergies and current medical conditions, to infrastructure related decisions such as traffic advisories and the relative proximity of hospitals with adequate medical facilities. By forming an effective and well-administered ambulance and fleet-management system that interconnects with medical centres, an emergency institution's capacity to respond to crisis in a timely manner is greatly enhanced. In addition, once such a system is in place, it facilitates interoperation and communication with other government entities such as the fire brigade, police force, and public defense institutions.

The proposed P2G (Peer-to-Grid) framework consolidates P2P and Grid computing research by addressing the mobility of transiently connected devices while supporting interactive configurability of components for dynamic data-driven distributed paramedical scenarios.

ACGT

Advancing Clinico-Genomic Trials on Cancer:

Open Grid Services for Improving Medical Knowledge Discovery

IST-4-2005 Strategic objective addressed: 2.4.11 Integrated biomedical information for better health

ACGT is an European project launched under CORDIS 6th Framework Programme, Call 4, Priority IST, in the E-Health domain, approaching the challenging field of Health Grids.

CONTACT NET participated in the proposal preparation for the European IST ACGT project by the identification of some necessary and optimal development directions, research and integration requirements, user-requirements analysis, the definition of the Project Scenarios, and by assuring the communication with the European Commission during the consultations timeframe, as well as consulting for the finalization of the project writing.

CONTACT NET ensured also the acceptance and participation of a Romanian company in the ACGT consortium.

ACGT Project Objectives:

The ACGT proposal focuses on the Strategic Objective of Integrated biomedical information for better health whose fundamental objective is "Research and development on innovative ICT systems and services that process, integrate and use all relevant biomedical data for improving health knowledge and processes related to prevention, diagnosis, treatment, and personalisation of health care."

ACGT's vision is to become a pan-European voluntary biomedical grid connecting individuals and institutions to enable the sharing of data and tools, creating a European Wide Web of cancer clinical research.

The ultimate goal being to speed the delivery of innovative approaches for the prevention and treatment of cancer. The infrastructure and tools created by ACGT also have broad utility outside the cancer community. Ultimately, the most important beneficiaries of ACGT will be the cancer patients themselves and the public at large.

Projects Portofolio

PACS Market Survey

The Market Survey aimed to identify and assess the degree of awareness, as well as the existing and potential market, for the implementation and utilization of the Picture Achieving and Communication Systems in Hospital and Medical Institutes. The potential for development and the interest in scientific research activities using medical imaging techniques were further assessed. The PACS Market study was performed in Romania, being planned to continue in Poland, Czech Republic and Hungary.

The Market Survey was performed in the medical environment, gathering a complex panel of respondents (IT specialists, medical specialists and administrative decision makers) from a representative sample of hospitals and other medical institutions, in order to investigate the PACS (Picture Archiving and Communication Systems) market from both the DEMAND and OFFER perspectives.

From the DEMAND point of view (customer-related information), the survey analyzed the degree of awareness, implementation and utilisation of the PACS and PACS-related systems in the medical and research institutes in Romania. Further on, the survey prospected the potential of the market development in the field, present and future opportunities, main drawbacks and barriers signalling areas of potential intervention, reasons and preferences that could reveal tendencies and perspectives in the long run. The survey also attempted to assess the interest in Scientific Research activities involving medical images and the capacity to perform such activities by means of the imaging technologies currently used in the hospitals. The interest in the international research projects was also ascertained, as well as

the respondents` motivation and the possibility to join the networked international research programs based on digital medical imaging techniques.

Another objective of the survey was to prospect the PACS market from the OFFER perspective (vendor-related information), by identifying the key producers, vendors and/or distributors of such system already present on the Romanian market, either local or foreign companies, as well as the main market trends and potential changes in the short/medium run.
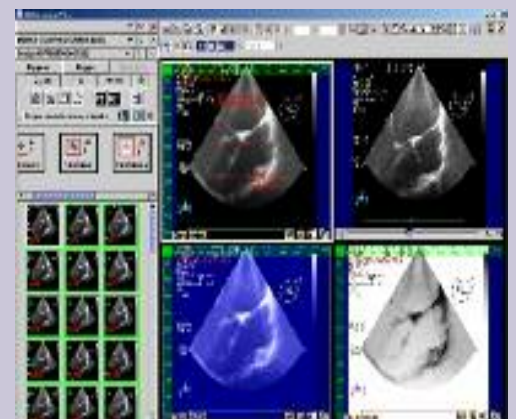
The survey revealed some strengths and weaknesses of companies from the Romanian perspective, tendencies and preferences of the potential customers for local / foreign PACS vendors, or for the traditional partners with regard to software development and implementation. The report also presents some information about the development initiatives and efforts conducted in the Health environment and infrastructure, at the regional and national level. The following pages outline the key information outputs that resulted from this survey.

PACS Market study consisted of both Quantitative analysis and Qualitative analysis. The Interviewing period was August - September 2004.

Generally, the respondents were in the range of:
- Radiology doctors (usually the Chief of the Radiology department)
- IT specialists (usually IT managers)
- System engineers
- Administrative decision factors.

The sample of interviewed medical units included major hospitals and medical institutes from urban areas, which would be most likely to use a PACS system - either at present or in the short / medium run.

IQPACS InfoWorld

ATTR -

Romanian Technical Foundrymen Association
http://www.foundry-attr.ro/

Long-run Partnership for:
- Web integration
- Consulting for B2B integration

The integration of the Romanian Technical Foundrymen Association (ATTR) within the Internet space has been achieved in 2002 with the support and direct assistance of CONTACT NET company. The http://www.foundry-attr.ro/ web site outlines the profile, activity and performances of our national association within the digital media, as well as the connection to the World Foundrymen Association (WFO) - http://www.thewfo.com/.

Based on this initial project, ATTR and CONTACT NET have established a long run partnership for continuing the upgrading and development of the ATTR web presence, project management and business development performed by CONTACT NET in the view to extend the international operations, and the attempt to enter the B2B international frame.

E-Inclusion -
PHARE Project for Disabled

- Business Plan for the set up of protected private companies - 30% disabled employees
Ordered by ISTPH - The State Territorial Institute for Disabled People
- Project for the ISTPH web integration

INTERNETICS Festival -

Romanian National Web & Multimedia Festival
http://www.internetics.ro/

Organized by Millenium-Image & Communication Group

Consulting for the initiation of the Festival: CONTACT NET has co-operated with Millenium Communications in the initiation and organization of the festival - first edition, as Specialist Consultant, in charge with business development, funds raising, business & communication relationships establishment, negotiation and contracting.

INTERNETICS is the first Festival of Digital Communication in Romania.
At the 4th edition this year, the INTERNETICS contest and the digital gallery address all the digital art creators: web design agencies, companies, institutions and freelancers.

"The initiation of the Romanian Web Sites contest INTERNETICS Festival www.internetics.ro, in 2001, has been the event that occasioned the first partnership with CONTACT NET Consulting company, which later proved to be one mutual rewarding long-run collaboration opportunity.
CONTACT NET has co-operated with Millenium Communications in the initiation and organization of the INTERNETICS Festival - first edition - as Specialist Consultant, in charge with business development, funds raising, business & communication relationships establishment, negotiation and contracting. We hereby recommend CONTACT NET to any company interested in developing VISIONARY and CHALLENGING projects, and look for a partner for developing and managing the business process."

Andrei Bortun
President, Millenium Communications

PUBLISHING

e&m Global Perspective
http://www.contact-net.ro/index.php

Since December 2000, CONTACT NET has been the editor of the on-line magazine e&mGlobal Perspective (Rom & Engl versions), which by its integrated content was meant to provide a link of transparency and accuracy to updated information.

The Magazine offers to all those interested in E-Business, IT & Communications a broad range of information presented in an objective manner, challenging but still realistic, designed to form, inform and educate the target in an area where any decision could prove financially vital.

The on-line magazine e&mGlobal Perspective has been designed to get at corners of the audience within the business and INTERNAUTS' media, providing topical interest subjects to a representative target - the influential business scene, opinion leaders, decision-makers and persons in charge for investments, as well as high academic environment and specialist commenters.

A wide range of topical subjects are presented and commented, revealing business opportunities, beforehand strategic details, information of educational value and professional implementation guidance. Beside informing in depth about IT

"Our partnership started December 2000, when CONTACT NET launched the online magazine e&mGlobal Perspective [...] The magazine was a pioneer on the Romanian online publishing market, offering a broad range of information presented in an objective manner, challenging and realistic, designed to form, inform and educate the Romanian IT business community.
The very good collaboration was extended after the launching of the «xxi Solutions - Competitive Management for the Informational Society». Further on, Oracle's performances in the Internet field were very effectively promoted by CONTACT NET at INTERNETICS 2001 - the first Internet festival in Romania..."

Radu Crahmaliuc
Marketing Representative,
ORACLE ROMANIA

markets, competing products and services, comments on major events are also present, market studies and latest news on legislation and fiscal issues, proving of high impact on the considered areas.

"xxi Solutions - Competitive Management for the Informational Society"
http://www.solutiixxi.ro/

One year after the launch of the on-line magazine, CONTACT NET extended its publishing activity in December 2001 by putting on the market, together with ARIES (The Romanian Association for Electronic and Software

Industries), the periodical magazine
"xxi Solutions - Competitive Management for the
Informational Society".

The new magazine was worked out in printed
format (Rom version), and distributed free of
charge on a monthly basis. Moreover, since its
very launching, the magazine was also present
on the Internet, in both English and Romanian
languages, at http://www.solutiixxi.ro/.

The Mission set for the new publication was to
meet some requirements which were not fully
covered on the Romanian market, namely to pro-
vide the Top Management segment in Romania
with a clearer view on the series of benefits that
the new Internet and IT&C solutions could bring
to the development of management systems with-
in all fields of activity (Financial, Commercial,
Education, Human Resources), in the context of
the new Information Society.

E-SOFT Project -
"XXI Solutions" Magazine

The Resources and Information Centre for the
Technologic Park Development
PHARE Programme, co-ordinated by the Regional
Development Agency Bucuresti-Ilfov

- Concept, plan and editing
  of the print & on-line magazine
  (engl/rom) "XXI Solutions - Competitive
  Management for the Informational
  Society"
- Ordered by ARIES-Romanian Association
  for the Electronic & Software Industry

One year after the launch of the initial on-line
magazine, ARIES entered the partnership with
CONTACT NET in December 2001,
in the editorial and publishing field,
by putting on the market the periodical Magazine
"xxi Solutions - Competitive Management for the
Informational Society".

The new Magazine was worked out in printed for-
mat, Romanian Language, and distributed free of
charge on a monthly basis. Moreover, since its
very launching, the Magazine was also present
on the Internet, in both English and Romanian
Languages.

*"Our collaboration started based on CON-
TACT NET experience in business develop-
ment, media and communication field, as well
as the early success of the e&mGlobal
Perspective on-line magazine, which CON-
TACT NET has been edited since December
2000 in both Romanian and English lan-
guages... We hereby acknowledge our long
and rewarding collaboration with CONTACT
NET to which we have been partners in devel-
oping the communication project «xxi
Solutions - Competitive Management for the
Informational Society» ."*

Alexandru BORCEA
President, ARIES - Romanian Association
for Electronic and Software Industries

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