

## 特 集：ロシアのIT産業 その2

今号ではNo.1に引き続き、ロシアのIT産業関連のソフト開発を行うベンチャー企業をご紹介します。

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## 1. ロシアのコンピューターソフト開発

ロシアのIT産業は1990年代の初めに産声を上げ、その後成長産業として拡大の軌道を進み、多くの成功したベンチャー企業が登場している。

2001年のロシアのIT市場は2000年に比べて25%拡大し、30億ドルに達した。この中にはコンピューターのハードとソフト、サービス、情報通信が含まれる。ロシアのIT化がまだ低いレベルにあることから、この拡大基調が今後しばらく続くことは確実と見られ、投資も伸びている。IT産業は国にも認知され、IT発展のための法整備も進んでいる。外国からの関心も極めて高い。

IT関連の輸出で最も注目されるのはソフト開発である。主として私企業が担っており、その規模は年間5～6億ドルと推定され、2005年には25～30億ドルに達すると見られる。

ソフト開発のうちアウトソーシングは2001年で1億5,500万ドル、2003年には3億5,000万ドルに達すると予測されており、ソフト開発に占める割合は2001年で31%、2003年で35%の見込みである。

現在ロシアでアウトソーシングのソフト開発に携わっているのは約100社、2万人が働いている。

クライアントにはインテル、モトローラ、サン・マイクロシステムズ、ボーイング、ノーザン・テレコムといった著名企業もある。それは他国に比べても専門能力が高いこと、相対的な安さ、西ヨーロッパやアジアへの距離が近いことが原因である。

短所はプロジェクト管理の経験不足、ISO9000やCMMの認証を受けていない会社が多いこと、ロシアのビジネスイメージがまだ悪いことである。

ロシアのソフト開発企業を分類すると次のようになる。

- ロシアの大手企業 42%
- インテル、モトローラといった国際企業のロシア出先 25%
- 従業員15人以下の小企業 30%
- その他 3%

また、開発と販売については次のように分かれる。

- 開発のみを行なう企業 65%
- 開発と販売の両方を自分で行なう企業 25%
- 販売のみを行なう企業 10%

地域的には次のような分布となる。

売上300万ドル以上の企業の31.3%がモスクワに、18.8%がサンクト・ペテルブルグにあり、残りがその他の地方である。

1社の平均従業員数はモスクワが45人、サンクト・ペテルブルグが30人、その他の地方が35人である。

モスクワの企業が最も給与水準が高く、マネージャーで月額800～2,700ドル、開発者で500～1,600ドルである。

ロシアのIT分野にも業界団体ができてきた。

- コンピューター・IT企業協会 (<http://www.apkit.ru>)
- プログラムソフト開発者協会 (<http://www.nstda.ru>)
- Fort-Ross 協会 (<http://www.fort-ross.ru>)

発注者は米国とヨーロッパ諸国がほとんどで、この趨勢は少なくとも2003年までは変わりそうにない。日本からの発注は全体の2～3%と推定される。

今後の売上拡大にはISO9001とCMMの認証の有無が大きくものを言うので、各社は認証取得に懸命の努力をしている。

## 今までの成功例

既に国際的に受け入れられ、世界で販売されているロシアのソフトもある。

Mobile Instant Messenger (ノボシビルスクのノヴォソフト社)

- GSMユーザーが携帯電話でICQソフトを利用できる。

アンチウイルス・情報保護ソフト Kaspersky(モスクワのKaspersky Laboratory社)

- 海外のコンピューター雑誌で、アンチウイルス部門のテストでトップになることが多い。

画像のオプティカル認識ソフト Fine Reader (モスクワのABBYY社)

PDA Cibico (モスクワのCibico社)

ソフト開発はロシアのIT産業の中で花形になる可能性を持っており、今後も常に注目する必要がある。

## (技術ニュースレター 1の「概観：ロシアのIT産業」の文中に出てくる「ロシア基礎研究ファンド」についての補足情報)

「ロシア基礎研究ファンド」は国の組織であり、基礎研究を行う研究機関に資金を供与する。すなわち、科学アカデミーの研究所は科学アカデミーと同ファンドから資金を受け取っている。ファンドはまず各研究機関から申請を受け、審査の後、資金供与の是非および金額を決定する。年間の資金供与プロジェクトは約8,000件で、関与する研究所や大学の研究者は数万人に上る。

その他、ファンドはデータベースの構築、技術情報の提供、フィールドワークの組織、学会議の開催、海外の会議への研究者派遣、論文集の発行、海外を含め論文や技術雑誌の整備、研究用資機材の購入補助等の仕事を行っており、ロシアの基礎研究を支える重要な組織である。

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## 2 . ロシアのソフト開発会社

### *1. Development and construction of systems for e-business and e-commerce, outsource programming, business software*

#### 1.1 Company Novosoft

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Phone: (+7-3832) 303 476

FAX: (+7-3832) 342 035

E-mail: [info@novosoft.ru](mailto:info@novosoft.ru)

URL: <http://www.novosoft.ru>

#### **Trends of activity:**

The “Novosoft” group of companies was based in 1998. It incorporates the Russian company “Novosoft JSC” and the U.S. company “Novosoft Inc.”, which has an affiliate in the city of Novosibirsk (NFC "Novosoft Inc."), accredited on the territory of the RF.

Novosoft offers a range of services to its clients, including:

- Application Re-Engineering;
- Business Applications;
- Customer Relationships Management;
- Data Warehouses, Data Mining;
- Database design and administration;
- Device Drivers (for WinNT, Win2000/98/95, Unix, Linux, OS/2);
- Distributed data processing;
- E-Commerce (b2b, b2c);
- Games;
- Information System development;
- Internet/Extranet/Intranet Solutions;
- Multimedia (music streaming, mp3, sound processing, graphics, animation);
- N-Tier Application Development;
- Porting;
- Product/application customization and support;
- Security and Cryptography;
- Systems Integration;
- Testing;
- Wireless/mobile programming.

Novosoft’s customers range from small businesses to multinationals and government agencies – IBM, Samsung America, Hewlett Packard, and US Department of Energy to name just a few. In 2001 Novosoft received the international recognition by offering the Mobile Instant Messenger, which subscriber of GSM can use popular program ICQ by mobile telephone.

## 1.2 Company Reksoft

Address: Malookhtinsky prospekt, 68, 195112, St. Petersburg

Phone: (+7-812) 325 2100

FAX: (+7-812) 325 2101

E-mail: [info@reksoft.com](mailto:info@reksoft.com)

URL: <http://www.reksoft.ru>, <http://www.reksoft.com>

### **Trends of activity:**

Reksoft evolved from an early stage start-up into Russia's premiere system integration house. Focusing on the high-growth converging Internet and telecom areas, Reksoft gained valuable expertise, clientele and a strong track record. By building a highly scalable fine-tuned ISO certified internal structure, Reksoft is best positioned to build on its leadership and remain Russia's top IT company, moving up the value chain and becoming the centre of consolidation for the fast growing Russian consulting and software services industry.

Reksoft offers a range of services to its clients, including:

- Systems Integration;
- IT Consulting;
- Software Development and Maintenance;
- R&D: Feasibility Studies, Pilot Projects, Prototypes.

Reksoft thus provides a range varying from value-added consulting, to backing clients' product research with high-quality coding, to overtaking the software development operations of the client entirely.

The Company employs over 140 people, mainly in Development and Quality Assurance and Sales and Marketing, which makes it one of the largest teams in the Russian IT services industry, and is consistently increasing its headcount. The Company has created a middle-management layer comprised of qualified project managers with strong international experience. This layer, along with fine-tuned project management, recruiting and information systems, makes Reksoft a highly scalable organisation, ensuring manageability and quality along with growth. Reksoft sees this as crucial factor in order to succeed in a planned aggressive expansion.

### 1.3 Company Luxoft

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URL: <http://www.luxoft.com>

LUXOFT company is a member of the leading Russian IT group IBS (<http://www.ibs-company.com/>) which employs over 2,000 specialists. LUXOFT was founded as a separate entity in April 2000. For five years before that the company was known as a Software Development Division of IBS that took part in complex software projects for leading Russian enterprises such as LUKoil, Gazprom, Neurosurgery Hospital named after Dr. Burdenko, Ministry of Railways, Saving Bank of Russian Federation, Vimpelcom, and many others. With the increasing demand for offshore programming from foreign companies IBS management has set the task to enter the international market. This meant a different approach for business development activities and completely new requirements imposed on a company by its foreign clients. Thus, it was decided to establish an independent company that would focus on software development activities in accordance with the highest international standards. Today, LUXOFT takes part in the most complicated projects for the leading Fortune 500 companies utilising its broad experience and huge potential of Russian professionals. LUXOFT is targeting its services to the leading international companies, moving closer to its clients by opening local support and development offices in the United States and Europe.

The company is also aggressively expanding its regional development units in Russia with the aim of optimising scalability by engaging highly skilled scientists and professionals to perform complicated project programming.

LUXOFT offers a range of services to its clients, including:

- Business applications: development & consulting services;
- E-business solutions;
- Enterprise application integration (EAI);
- Application re-engineering;
- Application maintenance;
- Testing;
- Wireless solutions;
- Research services;
- Dedicated center set up.

Such famous companies and organizations as Boeing Company, DellSystems, Department of Energy of USA, IBM, Zurich Financial Services Group and etc. are among the customers of Luxoft company.

## 1.4 Company Inreco LAN

Address: P.O. Box 31, Vladimir, 600025, Russia

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FAX: (+7-0922) 230 897

E-mail: [plus@inreco.ru](mailto:plus@inreco.ru)

URL: <http://www.inreco.ru>

### **Trends of activity:**

Inreco LAN is a private Russian company established in 1989. Every member of its team has more than 10-years experience in successful IT-projects.

Inreco LAN is an innovative Russian software production centre, directed toward the offshore software development at the world market. Company office is located in the city of Vladimir.

Company has proficient managers. They are specialising in conducting long-term projects. The managers are certified in different development technologies and quality assurance of software products. They organise interaction with the client at all stages of product life cycle (analysis and matching of the requirements, development, beta-testing, testing and support). The managers are highly qualified in controlling both offshore projects and projects at the customer's site.

Over 30 experienced scientists, analysts, programmers and testers work for the company now.

Inreco LAN staff is skilled in a wide variety of tools.

Inreco LAN offers wide range of software development services from solving R&D tasks to plain coding.

Main areas of expertise are:

- Internet search and rubricating systems;
- Business analysis systems;
- Oracle and MS SQL Server data warehouses;
- Specific Internet applications including software for stock exchanges;
- E-Commerce including B2B applications;
- Analysis, prognosis and modeling applications based on neural networks, genetic algorithms and fuzzy algebra;
- SCADA applications;
- WAP applications.



## **1.5 V-6 Technologies Joint Stock Company**

Address: 103104, Russia, Moscow, Tverskoy Blvd., 7/2, Floor 3.

Tel/Fax: (+7-095) 363-0140

E-mail: [v6@v6.ru](mailto:v6@v6.ru)

URL: <http://www.v6.ru>

### **Trends of activity:**

V6 Technologies, which was established in 1996, has been successfully developing the systems for personnel offices and corporate communications, the systems of automation of average- and small class sales marketing and puts into practice novel approaches for the business of the world producers.

V6 develops unique search mechanisms, knowledge management systems, corporate information portals, novel approaches for establishing communities, for modernization of personnel offices activities and development of inner nets, catalogues and large public portals. V6 Technologies integrates information systems of enterprises into a unified system with the help of web-services.

The V6 Technologies offers the customers an orderly system of projects management and efficient development of new applications on the base of technologies, modules and components from repository of ready decisions of the company.

V6 is one of few Russian companies which has a system of quality management certified by an international ISO 9001:2000.

Specialists having certificates of Sun, Microsoft, Oracle, IBM, Hewlett-Packard and Novell work in the company. The V6 company is a certified partner of the Microsoft company and participates in the Sun Developer Connection program.

Since 1999 the company has been offering services to international customers from Great Britain, France, the USA, Israel and Austria.

The European office of V6 functions in France.

## 1.6 Company InterRusSoft

E-mail: [am@inforus.org](mailto:am@inforus.org)

URL: <http://www.interrussoft.com>

### **Trends of activity:**

InterRusSoft is the innovative Russian software production center, oriented for rapid software development at the world market.

The company dispose competent managers who are knowing how to conduct the long-time projects, certified on technologies of development, quality assurance of software products and services, interaction with the client at all stages of life cycle of products (analysis and matching of the requirements, development, testing and beta testing and support).

Major areas of Interests:

- The Internet and e-commerce (OLAP and Data Mining, support of models b2b and b2c, intellectual retrieval machines, WEB-portal design);
- The high-speed communications and data protection;
- Systems of operative - strategic management of business ("business intelligence" solutions).

## 1.7 E-Style Software House

Address: 18, Bldg. 2, Bazhova Street, Moscow, 129128, Russia

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URL: <http://www.estylesoft.com/>

E-Style Software is an international company founded by the R-Style Group, the Russian IT veteran. E-Style Software is a member of E-Style Holding that comprises high-tech companies operating in different IT business areas.

The company has extensive expertise in the following fields:

- Management Information Systems for banking, financial trading, and budgeting;
- B2B and B2C Solutions;
- Production Control and Management Systems;
- Logistics and Transportation Planning Systems;
- Customer Support Automation Systems;
- Project and Resource Management Systems;
- Marketing Systems (market trends analysis and forecasting, advertisement and media-planning);
- Data Warehouses and OLAP-Systems;
- Knowledge Management Systems;
- Statistical Analysis Systems;
- Distance Educational Systems;
- and other business areas.

E-Style Software certified programmers are experienced in software development for Windows 2000, Windows NT, Unix and Linux, Novell NetWare, OS/2, and other operating systems.

Complex systems design and coding is made simple and manageable through the use of CASE tools such as Sybase PowerDesigner, Rational Rose, Oracle Designer, BPWin and SystemArchitect.

The entire group employs over 1,500 highly skilled English-speaking specialists. To meet the exacting expectations of customers and to assure the best quality of company products and services, company operate from two basic locations - New York, USA (a sales, marketing, and management center) and Moscow, Russia (programming center). Company development teams are also located in St. Petersburg, Novosibirsk, and other scientific centres in Russia.

## 1.8 Company STAR SPB

Address: Tambovskaya 12, 192007 St.Petersburg, Russia, P.O.Box 527

Phone: (+7-812) 327 9900

FAX: (+7-812) 327 9865

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URL: <http://www.star.spb.ru>

STAR SPB is a member of the international STAR Group since 1995. 50% of the company belongs to STAR AG (Ramsen, Switzerland). The company itself was founded in 1991.

For almost 10 years we have been working for international customers, which gives us a clear understanding of market needs. Among our customers are such well-known institutions as CSC Denmark AS, the Institute of Advanced Studies of the United Nations University (Japan), Localisation Industry Standards Association (Switzerland), etc.

Today the main fields of company business are:

- Software Development (70%);
- Technical Translation & DTP (20%);
- Research & Development (10%).

The main working areas of our Software Engineering Division are:

- Business applications development;
- Internet-based applications development;
- Database design & implementation;
- Low-level & System programming.

STAR SPB permanently conducts research in different areas( optical character recognition, computer graphics, digital imaging, applied mathematics and machine learning). The results of company research are implemented in a series of software products, which STAR and its strategic partners offer for sale.

## 1.9 Company Aplana

Address: 84/32 Profsoyuznaya Str, Entrance 6, floor 7, 117485, Moscow, Russia

Phone: (+7-095) 748 1345, 748 1346

FAX: (+7-095) 333 6412

E-mail: [info@aplana.com](mailto:info@aplana.com)

URL: <http://www.aplana.com>

APLANA Software is a steadily growing software services company, a member of Russia's top high-tech group – I.T.Co (<http://www.it.ru>). Formerly known as I.T.Co Custom Software Development Center, Aplana provides a wide spectrum of high-quality software services for international customers with focus on development and integration of software systems according to customer requirements.

Aplana offers the following software services:

- Custom software development: full of applications development in accordance with customer's individual requirements ;
- Applications integration: providing interaction of legacy systems with newly developed, implementation of fully integrated software environment;
- Implementation and customisation of third-party software solutions: implementation and fine-tuning of software solutions in accordance with current business processes and individual demands;
- Software maintenance: technical support and product development (development of new versions), including third-party products, internal solutions of IT departments, etc);
- Development and implementation of specialised solutions designed using ready components or technologies and experience of successful projects. Whenever necessary, customisation based on existing components is provided.;
- Testing services: large-scale testing projects on the base of dedicated Test Center capable of simulating any information environment. Functional and load testing is carried out by use of automated testing tools according to specially developed testing plans and scenarios. ;
- Professional services: provision of qualified specialists for temporary participation in projects in the customer's premises;
- Consulting in the area of project management: development and introduction of management processes for complicated projects, project budget evaluation methodology.

Professional services Aplana offers on-site and off-site software services, providing different business models and flexible contract terms.

## 1.10 AstroSoft Development

Phone: (+7-812) 324 7707

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URL: <http://www.astrosoft-development.com>

AstroSoft Development is a steadily growing company within the AstroSoft Group, which provides outsourced software development services to overseas customers and whose highly qualified staff has a deep understanding of what it takes to be a customer-oriented market player.

Founded in 1991, AstroSoft started with only 4 employees. Now it is a group of five companies that employs more than 160 professionals. AstroSoft Group's business activities are spread through both local and international markets.

AstroSoft offers a number of custom software development services including:

- **Net applications development and migration**  
WEB development based on ASP.Net and Web Forms: WEB services, applications and controls (XML, SOAP, WSDL, UDDI, .Net Passport). Development for Windows platforms with Windows Forms and .Net framework class libraries. The whole set of Visual Studio 7.0 programming languages.
- **Embedded communication software**  
Developing communication protocols like TCP/IP, PPP, SMTP, HTTP, SNMP, FTP, DHCP, USB etc, optimised for running inside embedded systems.
- **Device drivers for Windows**  
Drivers for different kinds of hardware for any member of Windows operating system family.
- **Compilers and other tools for embedded software**  
C and C++ compilers and other development tools for developing embedded applications. One-month-adjustment to any instruction set.
- **SAP R/3 integration with external systems**  
Developing applications, which communicate with SAP R/3 via SAP COM+ connector and Microsoft BizTalk Server.

AstroSoft Group has been awarded Microsoft Certified Partner status and was listed in the "Dator top 100" most professional companies in the computer business in Russia

### **1.11 Company B52 Technologies Inc.**

Address: 1st Khoroshevskiy pr-d, 3a, Suite 406 Moscow, Russia, 125284

Phone: (+7-095) 945 4188

FAX: (+7-095) 255 6451

E-mail: [info@b52tech.com](mailto:info@b52tech.com)

URL: <http://www.b52tech.com>

#### **Trends of activity:**

B52 Technologies Inc. is a company providing software outsourcing services to clients in Russia and abroad.

The company's primary focus and expertise are in the financial sector with applications ranging from electronic banking, trading systems and modelling, insurance, enterprise resource planning, warehouse management to small business accounting. In addition, company have significant experience in communication, surveillance, personnel tracking and medical applications.

At B52 Technologies, develop on a variety of platforms and employ both the newest and well proven tools on the market, including IBM, Sun, SCO, Windows, Novell, Informix, Unix flavors, Oracle, C, Visual Basic, Delphi, HTML/XML, Java.

## **1.12 Arcadia, Inc.**

Phone: (+7-812) 164 8456

FAX: (+7-812) 324 7700

E-mail: [info@offshore-software.ru](mailto:info@offshore-software.ru), [info@arcadia.spb.ru](mailto:info@arcadia.spb.ru)

URL: <http://www.offshore-software.ru>, <http://www.arcadia.spb.ru>

### **Trends of activity:**

Arcadia, Inc. one of leading companies in Russian software development, which caters to the international marketplace from offices in Russia and the United States.

Arcadia, Inc. offers a wide spectrum of software related services, delivering packages which include required consulting, software development and maintenance.

Arcadia, Inc. offers a number of custom software development services including:

- Software Development (Windows, UNIX, MacOS, Internet-related programming);
- Web Applications Development;
- Application Maintenance;
- Application Reengineering;
- Data Conversion;
- E-business Solutions.

In just seven years Arcadia Inc. has developed reliable business relationships with a number of Western companies. Several company managers have experience of work for the Western companies.



## ***2. Antivirus programs & information protection***

### ***Antivirus programs:***

#### **2.1 Kaspersky Laboratory Joint Stock Company**

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Tel:(+7-095) 797 8700

Fax: (+7-095) 913 5087

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URL: <http://www.kaspersky.ru>

#### **Trends of activity:**

The Kaspersky Laboratory, a Russian antivirus software developer, offers a wide range of antivirus protective means – Kaspersky Antivirus Protection (AVP). A wide range of software products offered by the Company is intended both for home users and corporate networks of any scale. The Kaspersky Laboratory's antivirus techniques ensure a reliable control of all possible sources of computer viruses penetrating: they can be used at workstations, file servers, WEB-servers, messaging systems (SMTP-gateways) and internetwork screens.

The AVP supports the following OSs: DOS, Windows 9x/2000/ME/NT, OS/2, Linux, Novell NetWare. All AVP versions use a common antivirus base containing procedures of detecting and deleting about 55,000 computer viruses and harmful programs of all types. Easy control means give the user an opportunity to automate antivirus protection of computers and corporate networks. Regular refreshing of virus bases via Internet is available.

The Kaspersky Laboratory offers three ready antivirus protection techniques intended for main categories of users. Firstly, the antivirus protection for home users (one license for one computer). Secondly, the antivirus protection for small and middle business (up to 100 workstations in network). Thirdly, full-scale protection systems for corporate clients (more than 100 workstations in network).

## 2.2 DialogNauka Joint Stock Company

Address: 117786, Moscow, Vavilov Str., 40, RAS Computer Center, office 102

Tel: (+7-095) 135-6253, 137-0150

Fax: (+7-095) 938-2970

E-mail: [antivir@DialogNauka.ru](mailto:antivir@DialogNauka.ru)

URL: <http://www.DialogNauka.ru>

### **Trends of activity:**

The DialogNauka, a Russian developer of antivirus software. The Company's softwares support the following OSs: DOS, Windows 9x/2000/ME/NT, OS/2, Linux, Novell NetWare. Regular refreshing of virus bases via Internet is available.

DialogueScience develops a new range of antivirus services and software packages which are the best in its' class on the international market. For many years our antivirus programs are the most popular in Russia and other East European countries.

Starting from 1996 Doctor Web scanner is always highly graded at the international contests run by the Virus Bulletin (Great Britain) and VTC (Germany). Many times Doctor Web was awarded with highly the regarded "100% Virus Bulletin" award. The first ever in the world all-over Windows 9x memory check was implemented in Doctor Web, which makes it possible to detect and cure the complex Trojan programs and viruses such as Back Orifice, Win95.CIH ("Chernobyl"), Win32.Kriz, CodeRed etc. in memory. The first ever in the world sophisticated monitoring of virus activity based on Artificial Intelligence was implemented in SpIDer Guard.

Among the DialogueScience's customers are more than 2,000 corporations in Russia and Eastern Europe, including the Administration of the President of Russian Federation, the Parliament Election System, Ministries of Defence, Economics, Finance, Science and Technologies, Education, Pension Fund etc.

## ***Data protection:***

### **2.3 LanCrypto Joint Stock Company**

Address: 129090, Russia, Moscow, Szhepkina Str., 22, office 22

Tel: (+7-095) 974 7659, 974 7660, 974 7661

Fax: (+7-095) 974 7662, 974 7663

E-mail: [lancrypto@mtu-net.ru](mailto:lancrypto@mtu-net.ru)

URL: <http://www.lancrypto.com>

## **Trends of activity:**

LAN Crypto was founded in 1991. This was the beginning of Russian information security market. We are the best on this market now.

The main field of our activity is information security:

- digital signature;
- digital envelope;
- digital safe.

All products provide a high level of safety, confirmed by Russian and international certificates. Company got products as an application software and as a developer's tool-kit for any of the following operation systems MS DOS, OS/2, Windows 3.x/95/NT, UNIX SCO, LINUX, Solaris, HP UX, VMS/VAX, etc.

LAN Crypto software gives an opportunity to use electronic documents and to develop the law base of paper-free technology of the office-work.

## **Basic products:**

- **Vesta** (digital envelope) protects an electronic document from reading in the process of transferring it via Internet;
- **Ortis** (digital safe) protects data on computer hard disk from unauthorised viewing;
- **Cryptobank** (electronic document management technology) serves for creating and drawing electronic documents. It represents a combination of a digital signature and envelope;
- **Certification Center** (public keys certification technology) is intended for controlling and certifying system's users public keys, as well as for client authorisation and protection of documents from unauthorised access while transferring via open communication channels;
- **EMC** is a dynamically plug-in extension of Microsoft Exchange and Microsoft Outlook mail programs. Strict confidentiality of business and personal correspondence is guaranteed;
- **Notary public** (digital signature) serves for confirming the authorship and document's authenticity.

## 2.4 Penza Electrotechnical Research Institute Joint Stock Company (Moscow branch)

Address: 127018, Russia, Moscow, Obraztsov Str., 38

Tel: (+7-095) 289 4367

Fax:(+7-095) 289 4142

E-mail: [info@mo.msk.ru](mailto:info@mo.msk.ru)

URL: <http://www.security.ru>

### Trends of activity:

The Moscow branch of the Institute specializes in the field of developing, creating and building the cryptographically protected electronic payment distributed systems and document management. Base trends of activity of the said Institute are the creation of special software products for cryptographic data protection, and the creation of protected data and communication systems. Another trend of activity is the integration in the field of comprehensive data security in large corporate networks and different data and communication systems.

### Basic products:

- File cryptomanager "**FCOLSEOW**" is a an application WIN API 32 allowing with the aid of cryptographic techniques to solve tasks of data protection in the process of data storage and transferring via communication channels;
- **Cryptographic server** is a means intended for usage in client/server systems, for example, in data bases access systems, bank/client systems, etc. It is based on the principle of separate functioning of inquiry processing systems and cryptographic data protection systems;
- Hardware and software packet "**IP-flows coder**" ("**SHIP**" **hardware and software packet**) is intended for data protection in communication channels in on-line mode under protocols IP, IPX, X.25, Frame Relay, etc;
- "Verba", "Verba-W", "Verba-U", "Verba-O", "Verba-OW", "Verba-OU" for operating systems DOS, Windows (3.x, 9x, NT), UNIX;
- "Server - DS", KC NT, KC HP - cryptographic servers for OS DOS, Windows NT, HP-UX ensuring encoding and electronic signature in database and application servers independently from their hardware and software platform;
- Protected electronic mail X.400 (a member of protected post office, cryptographic server, subscriber terminal for OS DOS, Windows);
- "Verba (Verba-O)-Crypton": a firmware for data cryptography in computer networks.

### ***3. Optical text and image recognition & Linguistic tools***

#### **3.1 ABY SOFTWARE Joint Stock Company**

Address: 125015, Russia, Moscow, Butirskaya Str., 8; P.O.B. 72

Tel: (+7-095) 234 4400

Fax: (+7-095) 956 4787

E-mail: [office@abby.ru](mailto:office@abby.ru)

URL: <http://www.abby.ru>, <http://www.abby.com>

#### **Trends of activity:**

ABBYY's business is to develop and sell AI (Artificial Intelligence) applications, and, in particular, document recognition and natural language processing applications that help people overcome language barriers in a world that is globalizing at an ever increasing pace.

ABBYY Software House (Moscow, Russia) creates the technological strategy of the company, develops the software products, and controls the overall management of the Group, as well as the sales in Russia and other regions. ABBYY has representative offices in USA (ABBYY USA, Fremont, CA), Ukraine (ABBYY Ukraine, Kiev) and Europe (ABBYY Europe, Germany, Munich), partners in France, UK, Australia, Italy, Eastern Europe, India, etc. (more than 75 countries).

The development of a science-based software product, such as OCR system, requires a deep scientific research. This research is an integral, fundamental part of development process in ABBYY. The non-confidential results of this research serve as a base for many theses, reports and articles, the authors of which are company's employees.

ABBYY's products are:

- The award-winning OCR ABBYY FineReader 6.0 - system for automatic input of texts, tables and forms into computer;
- An automatic data capture system ABBYY FormReader (OCR/ICR/OMR), which interprets hand print, machine print, check boxes and barcodes from paper forms gathered from fax machines and scanners;
- FineReader Development Tools that allow developers to integrate OCR/ICR capabilities into their own solutions;
- ABBYY Retrieval & Morphology Engine - an SDK kit for integrating full-text index, retrieval and linguistic technologies into other applications;
- English-Russian-English electronic dictionary Lingvo.

In 1998 ABBYY's product - OCR system FineReader - became the world quality leader in OCR industry. It is proved by feedback from our customers and results of comparative tests, held worldwide by international IT magazines. ABBYY FineReader products received more than 50 awards from leading IT magazines worldwide.

### 3.2 PROekt MT joint stock company

Address: 197342, Russia, St. Petersburg, Vyborg Emb., 61

Tel: (+7-812) 327 4425

Fax: (+7-812) 327 4483

E-mail: [webmaster@promt.ru](mailto:webmaster@promt.ru)

URL: <http://www.promt.ru>, <http://www.translate.ru>

#### Trends of activity:

PROMT is the leading provider of innovative machine translation technologies (MT) and the acknowledged researcher in the field of natural languages processing. The powerful combination of latest achievements in linguistics and technological perfection of development process ensures the highest quality of company MT systems. The company specialises in the development of language translation systems for European languages, ensuring a high quality translation from/into English, French, German and Russian.

#### Basic products:

- **PROMT Translation Server (PTS)** is intended for use in corporate nets of organisations; **PTS** has a client-server architecture, can be applied in heterogeneous nets, is provided with means of administrative and other control over users' actions which can be stratified over different levels;
- **PROMT NET** version is the final solution for ensuring a Multilanguage management of documents within an organisation. There is an opportunity to arrange work of an unlimited number of local net users;
- **PROMT Internet Translation Server (PITS)** – online translation of information;
- **Magic Gooddy** – a multimedia translator for a home PC;
- **PROMT Mail Translator** – a system for translation of electronic correspondence.

### 3.3 Company ATAPY Software

Address: 630007, POB 227, Novosibirsk, Russia

Tel: (+7-3832) 396 569

E-mail: [office@atapy.com](mailto:office@atapy.com)

URL: <http://www.atapy.com>

ATAPY Software is a private computer software company incorporated in Russia.

Company providing the world's IT community with high-quality contract programming services, helping people save a lot of time and money on software development.

ATAPY Software offer a wide range of computer-related services while specializing in the following areas:

- OCR/ICR applications;
- imaging;
- computer linguistics;
- expert systems and other AI-intensive areas;
- EDMS;
- data format conversion;
- web programming.

ATAPY Software experience covers C/C++, Delphi, Visual Basic, Visual InterDev, Visual FoxPro, Java, Perl, PHP, HTML, XML, SQL, UML (Rational Rose, Visio), IDEF0, IDEF1, Lotus Notes, and other programming languages and platforms.

Located in Novosibirsk, the cradle of the first heavy-duty, industrially implemented ICR technology in history, ATAPY Software is close to many institutions and research centers that provide top-notch experience which enables company to solve nearly any task.

## ***4. Local area networks (LAN)***

### **4.1 Company Network Systems Group**

Address: Kirpichnaja Street, Suite 1302, Moscow, 105187

Phone: (+7-095) 918 3211, 918 2700

FAX: (+7-095) 918 2739

E-mail: [info@nsg.ru](mailto:info@nsg.ru)

URL: <http://www.nsg.ru>, <http://www.nsg-ru.com>

#### **Trends of activity:**

"Network Systems Group" develops, produces and supplies modern telecommunication equipment.

The company has passed the way from distribution of foreign telecommunication equipment, of individual designs of network software and individual test samples of equipment to manufacture of equipment for local and global nets: X.25, Frame Relay, TCP/IP, Internet.

At present the company produces and supplies a wide range of various-performance net equipment:

- Multi-protocol routers and FRADs;
- Centers of commutation of packages and PADs;
- Internet access devices, including xDSL of "last mile" equipment;
- X.25 equipment for cash dispensers and POS-terminals;
- Intellectual adapters for personal computers;
- Protocol analyzers and testers, etc.

The most modern instrumental means of software development and the element base are used when designing the devices. It allows, alongside with the efficient system of control and testing, to ensure high quality and reliability of the products.

The equipment produced by the company is a real alternative to the products of such companies as Cisco, Motorola, ING, RAD and others by functional characteristics and costs, that is testified by successful operation of hundreds of devices on the territory of Russia (from Kaliningrad to Vladivostok) and in the adjacent countries.



## 4.2 Prolan Joint Stock Company

Address: 125130, Russia, Moscow, Klara Tsetkin Str., 26

Tel: (+7-095) 913 3067, 913 3068,

E-mail: [info@testlab.ipu.rssi.ru](mailto:info@testlab.ipu.rssi.ru)

URL: <http://www.prolan.ru>

### Trends of activity:

Computer networks design and installation, development and introduction of software for computer networks diagnostics and testing.

### Products:

- Program **FTest ver. 3.20** is designed for local area networks diagnostics by the method of stress testing. Program FTest 3.20 is a part of packet FTest Pro and "responsible" for a comprehensive check of local area network functionality. The functionality check is a verification of network's all components operation on the test bench under stress. In this case, both the working order of network's all components and their potential efficiency are being verified. Program FTest 3.20 operates on platform MS Windows 95/98/NT4/2000, and allows to test networks of any server's OS and any channel-type protocol (Ethernet, Fast Ethernet, Token Ring, FDDI, etc.);
- Program packet **FTrend 2.0** is designed for obtaining an integral estimate of network performance quality during its operation. It helps to localize those faults that are difficult to detect by the method of network stress testing using program FTest 3.20. Program FTrend 2.0 operates on platform MS Windows 95/98/NT4/2000, and allows to test networks of any server's OS and any channel-type protocol (Ethernet, Fast Ethernet, Token Ring, FDDI, etc.).

## ***5. Realtime OS & Decision Support System (DSS)***

### **5.1 TASMO-BIT Company**

Address: Russia, 111396, Moscow, Aleksey Dikij Str., 3, Bld. 5

Tel: (+7-095) 918 5108, 302 7802

FAX: (+7-095) 302 8670

E-mail: [bashlykov@tasmor.ru](mailto:bashlykov@tasmor.ru)

URL: <http://www.tasmor.ru>

#### **Trends of activity:**

Research efforts and introduction of products in the market of intelligent information technologies for industry and business, the development of real-time systems for intelligent information support.

Technical solutions are always based on the latest achievements in the automatic control, intelligence decision making support system theory and on the employment of modern control equipment and our own software complex systems SPRINT-RT, KOGRA-RT.

TASMO-BIT offers:

- Design, programming, adjustment and implementation in the "turnkey mode":
  - of the industrial computer control systems;
  - of the real-time decision making support system for diagnostics of ecologically hazardous objects and technologies;
  - of the cognitive real-time intelligent system for operating control;
  - of the real-time expert control systems for plants and manufactures;
- Inspection of the objects of the automatization and formulating the requirement specifications;
- Automatization feasibility study;
- Projects examination and tenders for control systems design priority organisation;
- Consulting service;
- Customers personnel training on the basis of the implemented control systems;
- Design and implementation of training systems for industrial plant operators as well as for the university and college students.

#### **Basic products:**

- **KOGRA RV** is a cognitive intelligent real-time system for on-line management. The Kogra system is used for representing the state of complex engineering objects under control in the form of special cognitive images. A cognitive image is a graphical dynamic modeling of behavior of a controlled complex engineering object. The main purposes of cognitive dynamic images consist in the opportunity to integrate a large number of adjustable variables in a single image with a distinct interpretation of this image by the

operator. The Kogra-RV system has been used in energetics, chemical and petrochemical industry, petroleum and gas transport;

- **SPRINT RV** is a knowledge-based real-time system designed for a decision-making support in complex engineering object management. The SPRINT-RV system is used as the SCADA system for real-time mode presenting the state of a management complex object. Evaluation and diagnostics of abnormal situations, progress forecast, control actions search (control commands, explanation of logic of "computer arguments" while operating online knowledge bases).

## 5.2 Prognoz Joint Stock Company

Address: Russia, Perm, 614000, Central Post Office, Box 4164

Tel: (+7-3422) 334 682, 335 651,

(+7-095) 995 8060.

Fax: (+7-3422) 335 577

E-mail: [info@prognoz.ru](mailto:info@prognoz.ru)

URL: <http://www.prognoz.ru>

### Trends of activity:

Development of information and analytical systems for supporting decision-making in various sectors of economy. The software products of the Sterling Group Prognoz company provide for an efficient information support of decision-making and allow to analyse present-day and forecast future financial and socioeconomic conditions of an object under investigation (sector, region, enterprise, bank, etc.)

### Basic products:

- **PROGNOZ Analytical complex.** Decision-making support systems being created are oriented applications of the PROGNOZ analytical complex – the Company's original development.  
The Complex is actually a package of programs for solving tasks of general analysis, modelling, forecasting and planning.
- **Analytical database** of the Complex is intended for storing hierarchically built multi-dimensional information. Though the Complex is oriented at a multi-dimensional presentation of data, direct processing of traditional relational tables or logical transformation of tables into many-dimensional objects is admitted. An easy for understanding interface of the Complex gives a user convenient means for non-regulated inquiries, creation of reports, data analysis and transformation.

## ***6. Development of systems of three-dimensional modelling, 3D, CAD/CAM***

### **6.1 Top Systems joint stock company**

Address: Russia, 103055, Moscow, PO Box 133

Phones: (+7-095) 978 9557, 978 9748

FAX: (+7-095) 978 9748

E-mail: [tflex@topsystems.ru](mailto:tflex@topsystems.ru)

URL: [www.tflex.ru](http://www.tflex.ru)

#### **Trends of activity:**

The Top Systems company specializes in the development and distribution of the T-FLEX CAD system of three-dimensional modelling. The company offers a comprehensive solution of the tasks of design and technological preparation of the production on the base of the T-FLEX software.

#### **Basic products:**

T-FLEX CAD software gage:

- T-FLEX CAD LT system (automation of drawing);
- T-FLEX CAD 2D (parametric designing and drawing);
- T-FLEX CAD 3D (three-dimensional solid-state modeling);
- T-FLEX CAD 3D SE combines all possible T-FLEX CAD 2D systems, as well as those functions of T-FLEX CAD 3D, that are required for drafting on the base of three-dimensional models, made both in the T-FLEX CAD 3D and in other systems. First of all, this refers to the programs on the Parasolid nucleus – Unigraphics, SolidWorks, Solid Edge et al, as well as to the CATIA system. Besides, the data can be imported from any other modeling system by means of IGES and STEP exchange formats. The system can serve as an efficient solution for those who do not need functions of modeling or for those who already have the systems of three-dimensional modeling. Proceeding from its functional possibilities, the T-FLEX CAD 3D SE system is oriented on those users who want convenient means of drafts designing, developed by three-dimensional models. Herewith, it is worth mentioning that the model itself is stored with the draft, and at any moment it can be modified in the initial system, for example, in T-FLEX CAD 3D or SolidWorks. After such a change, the draft can be automatically corrected in accordance with the changes of the 3D model. Many problems encountered by designers when using even the most advanced modeling systems, were solved using the T-FLEX CAD 3D SE during designing the drafts, built up by projecting of the three-dimensional models.

## 6.2 ASCON joint stock company

Address: Russia, St. Petersburg, Obvodnoy Canal Emb., 132

Tel.: (+7-812) 252 5377, 252 3724

Fax: (+7-812)252 5377

E-mail: [kompas@ascon.ru](mailto:kompas@ascon.ru)

URL: <http://www.ascon.ru>

### Trends of activity:

- Development, implementation and introduction of universally applicable CAD/CAM/PDM systems
- Integral service in automating of design and technological manufacturing tasks
- Introduction consulting in CAD/CAM/PDM

### Company achievements

- More than 1100 corporate customers
- Professionals of unique qualification in staff (ASCON has more than 100 employees)
- Self-developed core software of KOMPAS systems (3D, 2D, parameterization, technological design, PDM)
- Wide dealers' net in Russia and Commonwealth countries

### Basic products:

KOMPAS 5 software complex for Windows

KOMPAS 5 is a professional CAD system making it possible to solve problems during design of various articles on the basis of PC in machine-building, architecture and construction.

KOMPAS 5 is an integrated design environment incorporating as follows:

- KOMPAS-GRAFIK 5 high efficiency parametric drawing and design editor with a module for preparing specifications;
- KOMPAS-MANAGER 5 system for control of design documentation;
- KOMPAS-Spotlight and KOMPAS-Vector tools for vectorization and processing of scanned images for transforming paper archives into an electronic form;
- high power tools for development of applications;
- ready-made libraries and applied CAD systems for various fields;
- utilities for support of DXF and IGES formats.

### 6.3 Sprut-Technology company

Russia 107005, Moscow, 2nd Baumanskaya St., 5. SPRUT-T Center

Tel: (+7-095) 263 6057, 263 6970

Fax: (+7-095) 263 6614

E-Mail: [office@sprut.bmstu.ru](mailto:office@sprut.bmstu.ru)

URL: <http://www.sprut.ru/>

#### Trends of activity:

- Development and delivery of environments and aids for the CAD/CAE/CAM systems of the Sprut series;
- "Engineering audit" of industrial enterprises, creation of automation projects;
- Fast development of a turn-key technology for specialized automated intelligence systems using RAD (Rapid Application Development Tools) for the purpose.

#### Basic products:

- **The Sprut CAM** system is a 32-digit application for Windows 95/NT. The system is intended for the development of monitoring NC programs for three-dimensional machining of parts of any degree of complexity. A geometrical model is imported from files of the IGES format. Sprut CAM can be easily integrated into various CAD systems;
- **NCTuner** – a system for control and final adjustment of monitoring programs for two- and three-axis NC milling machines comprising all required means for realistic simulation of processing, as well as for adjustment and editing of a monitoring program;
- **SprutCad** is actually a 32-digit application for Windows 95/98/2000/ME/NT and is an open environment for automation of designer's and developer's work. SprutCAD fully supports the USDD standard and has a set of services which can be extended by a user. This allows to use it for creating a designer's workplace ensuring automation of standard design operations carried out by a particular specialist. The given system is provided with a library of standard parameter elements, makes use of a wide range of types, allows to create hierarchical graphical databases, compose a new drawing out of the available components, replenish in the course of operation a user base of standard solutions. A system of "intelligence editing" is also realized: the system will automatically correct a drawing in case of a changed value of any numerical parameter.

## ***7. Digital Signal Processing***

### **7.1 Company Spirit**

Phone: (+7-095) 912 7103

FAX: (+7-095) 912 7269

E-mail: [sales@spiritcorp.com](mailto:sales@spiritcorp.com) (For Japan [japan-sales@spiritcorp.com](mailto:japan-sales@spiritcorp.com))

URL: <http://www.spiritcorp.com>

#### **Trends of activity:**

SPIRIT is a prominent supplier of high-quality DSP (Digital Signal Processing) software products, including VoIP, FoIP, sophisticated speech processing, speaker ID, telephony, GPS, Audio and Video compression, face ID, and more. With major R&D offices located in Russia, SPIRIT also provides professional services in custom DSP software development and related areas.

SPIRIT's mission is to bring advanced telecommunication DSP software products for network backbone infrastructure and mobile devices to people worldwide (via partnerships with semiconductor and telecommunication industry leaders).

SPIRIT is committed to provide manufactures of telecommunication equipment with high-quality DSP software products optimized and tuned for their specific needs as well as provide extensive timely support and technical consulting.

- SPIRIT software is used in over 50 countries worldwide;
- SPIRIT's clients are Atmel, Furuno, Japan Radio Company, NEC, Nortel Networks, Panasonic, Samsung, Tadiran, Texas Instruments, Toshiba, and more;
- Texas Instruments is shipping SPIRIT's software bundled with TI C54 CST processor;
- The highest caliber technical team of 80 engineers, 15% holding PhD degrees;
- The largest Texas Instruments' 3rd party software partner in Eastern Europe.



## 7.2 JSC Research Center "Module"

Address: 3 Eight March 4th Str., Moscow, 125190, Russia

Phone: (+7-095) 152 9698

Fax: (+7-095) 152 4661

E-mail: [info@module.ru](mailto:info@module.ru)

URL: <http://www.module.ru/>

### Trends of activity:

Although RC "Module" was founded in 1990, the microprocessor division was established in 1995. The first goal of the division was to design the architecture and chips for optimal support of the proprietary neural network and image processing algorithms developed by RC "Module". NeuroMatrix<sup>®</sup> NM6403 is a high performance microprocessor with combination of VLIW and SIMD architecture. The processor is based on NeuroMatrix<sup>®</sup> Core (NMC) that includes two main units: 32-bit RISC processor and patented 1-64-bit VECTOR co-processor. Two communication ports hardware compatible with TI TMS320C4x DSP simplifies a multiprocessor systems design. The DSP has been designed by RC "Module" and produced by Samsung 0.5 $\mu$ m CMOS technology in 1998. Now NM6403 is in mass production phase.

It is the mission of RC "Module" to be a leading international supplier of high-end processor architectures and Silicon IP, mixed-signal ASICs, embedded computers and application software for DSP and artificial neural networks. In day-to-day life there are numerous events, which happen too fast to be recognised by the human eye or even PC-based computer, but need to be visualised for further analysis. High speed imaging technology allows one to capture fast motion. RC "Module" is committed to supplying customers with products and services that meet or exceed their expectations.

The main design results:

- NeuroMatrix<sup>®</sup> products:
  - NM6403 DSP and core;
  - PCI, CompactPCI and TIM boards;
  - Embedded image processing systems;
- Embedded computers for the International Space Station and the Yamal satellite.

### 7.3 Instrumental Systems Company

Address: Instrumental Systems Corp., Vorontsovskaya 23, Moscow, 109147, Russia

Phone: (+7-095) 232 1994

Fax: (+7-095) 330 1392

E-mail: [is.dsp@relcom.ru](mailto:is.dsp@relcom.ru)

URL: <http://www.insys.ru/>

#### Trends of activity:

Instrumental Systems develops, manufactures and sells a wide spectrum of hardware and software tools for digital signal processing.

- Data acquisition systems;
- DSP;
- Other peripheral systems;
- Software.

#### Basic products:

Instrumental Systems is a designer and manufacturer of the state-of-the-art data acquisition and digital signal processing systems. Productions allow :

- to create the DSP applications based on IBM PC, industrial VME PC, and micro PC;
- to design, to diagnosis and to debug hardware and software in the real-time mode.

The DSP boards offered to consideration is based on the following processors TM320 and ADSP-21 .

The development of software for signal processing systems is supporting with debugging kits that include the executive environment Deasy Tools, real-time operating system SPOX, graphical DSP programming system Hyper Signal, units control program functions, application programming interface, standard I/O functions, linker and symbolic debugger for Assembler and C.

DSP cards will help you to create data acquisition systems by connecting ones through the interface InSys-Link or by mounting the ADM and Data-Connect subunits on the ADP carrier boards.

The in-circuit emulators **EM25** and **EMU510** from Instrumental Systems corporation are designed to the developing and diagnosis of the digital signal processing systems that based on the Texas Instruments processors (TMS320C25/C2xx/C3x/C4x/C5x/C54x/C62xx/C8x). Scan-emulator EMU510 is the accurate XD510 analog except that the first of them has more low price. The JTAG controller that it sets on the EMU510 board allows to control of the emulator with the debugger tools from one of the following firms: Texas Instruments, White Mountain

DSP, Go DSP that provide onetime debugging a few processors in real-time mode with the Assembler, C and C++ languages.

The TIM-40 specification is proposed by Texas Instruments as base for creating the multiprocessors DSP systems with the TMS320C40/44 processors, and the SHARCPAC one is proposed by Analog Devises as base for creating the multiprocessors DSP systems with ADSP2106x processors. These specs are supported by many producers of the DSP systems. Modules are very exclusions and ones have not analags among other manufacturers.

## ***8. DataBase Management Systems***

### **8.1 Company Megaputer**

Address: 38, ul. Bolshaya Tatarskaya, Moscow, 113184.

Phone: (+7-095) 951 8079

FAX: (+7-095) 953 5371

E-mail: [mail@megaputer.ru](mailto:mail@megaputer.ru)

URL: <http://www.megaputer.ru>

#### **Trends of activity:**

Megaputer company specializes in development and production of analytical systems for the depth analysis of numerical and text data bases (Data, Text and WEB mining). During the time of its existence the company has worked its way up from a small research group of scientists-enthusiasts to a highly professional company, firmly entered the elite of the world producers of Data mining systems.

In cooperation with the Oracle and IBM corporations the Megaputer company offers to customers decisions on corporate and local data bases, on OLAP systems of rapid analysis with integration in them of aids developed by the company: Data, Text and WEB mining.

The products of the PolyAnalyst family are well known and used not only in Russia, but in the countries of Europe, the USA, Canada, Australia, Brazil, New Zealand, China.

## 8.2 Cronos RPC

Address: Moscow, Zoya i Alexander Kosmodemianskie Str., 34, Bld. 6

Tel: (+7-095) 450 1179, 450 6743

E-mail: [cronos@aha.ru](mailto:cronos@aha.ru)

URL: <http://www.cronos.ru>

Director: Sergey G. Lobanov

### Trends of activity:

DBMS development and maintenance.

### Basic products:

- **CronosPlus for Windows 9x/NT/2000 - the CronosPlus system** is designed for developing and operating data banks of any complexity without programmers' aid. It combines a simple and intuitively comprehensible interface with wide spectrum of possibilities of storing, integrating, processing and representing heterogeneous information. Internet-component for CronosPlu is designed for data banks operation in remote access mode via Internet/Intranet. This technology allows the remote users (or local area network users) to implement the retrieving, previewing and outputting data stored in the CronosPlus data bank (similar to client/server technology). In this case the client (a remote user) uses only a WEB-browser;
- **CROS - a documentary information retrieval system for Windows 9x/NT/2000.** The CROS documentary information retrieval system is designed for quick data retrieval in large volumes of documents of different types, it significantly facilitates the information accumulation and analysis process. The CROS system is indispensable to those who spent much time on retrieving and processing documents. It is designed for users whose disc is overflowed, and it becomes more and more difficult to deal with a great number of documents.