



RedNews

The newsletter of Redwood Technologies

Winter 2005/6

Headlines



**REDWOOD
TECHNOLOGIES**

Welcome to the Winter 2005/6 edition of RedNews - a selection of Redwood's top news stories of the last quarter.

In the last few months of yet another exciting year, Redwood has travelled to trade events around the world to showcase the brand new features in its award-winning RTSinfonia® product range.

Innovative new features have been announced for some of the company's established Converged Services applications, including the flexible RedMatrix® audio conferencing package and the class-leading RedView™ service statistics application.

For further information regarding any of the news articles, or for details of Redwood's Value Added Network Services product portfolio, please contact Sarah James on +[44] (0) 1 344 304 344 or sdj@redwoodtech.com.

Case Study (Europe) – KPN Directory Enquiries



Incorporated in 1989, KPN Telecom NV is the largest telecommunications company in the Netherlands. It provides telephony, mobile and data services to business and residential consumers in the Netherlands, as well as Germany (E-Plus), Belgium (BASE) and Western Europe.

At the end of 2004, KPN served 7.4 million fixed line subscribers and 1.6 million Internet users in the Netherlands, as well as 17.2 million mobile customers in the Netherlands, Germany and Belgium.

KPN offers a wide range of mobile communication, information, entertainment and commercial services. These include the company's Directory Enquiries facility, accessed in the Netherlands by dialling 118. Callers are provided with contact information for business and private residences, or company listings sourced by industry type.

A call completion facility is available which allows callers to be transferred to the number they have requested. Additionally the telephone number can be sent via SMS to a specified mobile device.

A hugely popular information service, KPN's 118 Directory Enquiries facility currently handles the highest number of calls per second and calls per day in the country. Calls are terminated from both mobile and fixed line networks.

Core intelligent switching functions for the service are provided using a Redwood Technologies INX™ (Intelligent Network Xchange™) platform. KPN runs a number of INX systems for a range of functions such as mass calling, network announcements and prepaid solutions. These have been in operation for over three years. In 2004 and 2005, KPN has extended its INX range to run the current 118 Directory Enquiries service.

In addition to using Redwood's RedSelector switching solution, KPN developed its own custom service additions for the 118 service. These were built using Redwood's RTComposer® Service Creation Environment. This has allowed switching, IVR, database and messaging functions to be customised exactly to KPN's requirements.

Further information on KPN and the company's range of products and services can be viewed at <http://www.kpn.com/>.



Case Study (Africa) – Innovative Communications Services in Angola

Based in Luanda, MS Telcom is one of Angola's leading Wireless Network Operators. The company supplies both voice and data services to wholesale business and residential customers.

MS Telcom uses Redwood's award-winning softswitch and Converged Services platform to bring together the elements of its circuit switched, packet switched, GSM and Fixed Wireless Access (FWA) networks.

The system provides full local exchange functionality to its subscribers, in addition to billing and Value Added Network Services. Subscriber voice and fax mail, VoIP and pre- and post-paid billing are all incorporated. Redwood's graphical Service Creation Environment, RTComposer, additionally allows MS Telcom to develop its own

supplementary services quickly and easily.

Latterly, a pioneering public payphone solution has been added to the infrastructure. Installed at a number of standalone and teleboutique locations in the greater Luanda area, the Redwood RedRouter™ PayPhone PIN-based architecture provides a reliable, secure and resilient public access solution.

Many of the MS Telcom retail premises incorporate Redwood's latest and most innovative payphone model, the RedRouter PayPhone Plus. This allows subscribers to purchase airtime or top up their accounts via the RedRouter PayPhone Plus dynamic voucher printing terminals, rather than as a set-value airtime scratchcard. The RedRouter PayPhone Plus allows any

denomination to be used, so consumers can access communications services with as little or as much money as they choose.

The process is simple:

1. The consumer simply makes a payment to the retailer, who then uses the RedRouter PayPhone Plus to register the payment with the central RedRouter prepaid billing system.
2. RedRouter creates a new account with a balance equal to the payment made. The sum is debited from the retailer's partition balance.
3. The RedRouter PayPhone Plus terminal prints a receipt with a PIN. The customer can then use the PIN to call from the RedRouter PayPhone.

For further details, please contact sales@redwoodtech.com.



Product Case Study The World's Leading Mass Calling Application



RedResponse®

Redwood has established itself as the world leader in the field of mass calling. It currently provides the technology behind the largest mass calling systems in the world.

Redwood's state-of-the-art RedResponse systems have been selected by some of the best known names in telecoms to handle the aggressive call conditions encountered in today's telecommunications networks.

Its reputation has been built on a thorough understanding of the mass calling industry. The RedResponse solution offers:

High Throughput

Redwood's systems have achieved various national and international world records in the field of mass calling. Vast call quantities have allowed Redwood's clients to benefit from substantial call revenues.

For example, in the space of six years, the series 'Who Wants to be a Millionaire?' generated an estimated 40 million calls in the UK, generating an impressive £27 million.

High Capacity

Designed to service tens of millions of callers, Redwood's data solutions allow vast quantities of data to be processed and stored in real-time, collating service responses and managing critical data such as tariffing and vote counting effectively.

The largest mass calling system in Europe, with a capacity of 20,000 channels, runs on Redwood equipment.

Reliability

Redwood's systems have been independently assessed to provide reliability figures of over 99.999%.

Content Management

Thousands of services can run on the same mass calling platform. The system may be partitioned to allow multiple Service Providers to utilise the same equipment simultaneously.

Service Analysis

Redwood's real-time and historical statistical tools allow information such as service effectiveness within a particular geographic region, repeat caller profiles and new caller profiles to be easily analysed.

Application Example – Pop Idol

Franchised by Fremantle Media and aired by ITV in the UK, callers vote for a winner throughout the series. The contestant with the highest number of votes wins.

The votes are handled by a RedResponse mass calling system – one of the largest of its kind in Europe. To date, millions of calls have been processed.

Sample traffic figures: 9 million votes in one evening.
(Sample date: 09/02/2004.)

Application Example - Big Brother

Franchised by Endemol and aired by Channel 4 in the UK, viewers interact with the Big Brother show via televoting. Voting in this instance is passive – viewers SMS a message or dial a unique telephone number associated with a vote choice.

The votes are handled by a RedResponse mass calling system – one of the largest of its kind in Europe. A huge volume of calls and messages are received throughout each series.

Sample traffic figures: 153,000 televotes during a one minute period; 2,750 calls in one second at peak; 6,363,325 votes during the evening.
(Sample date: 06/08/2004.)

Redwood's powerful service building and service provisioning tools make its mass calling systems the most flexible in the marketplace. Redwood's strength in the field of Converged Services ensures that clients are able to offer a huge range of content, and services can be updated quickly to track user tastes and retain or improve caller loyalty.

The high level RedResponse user interface allows users that may be unfamiliar with telecoms technology to build services quickly and safely. The service builder has a set of inbuilt service templates and a media library facility, which enables a new service to be set up in minutes.

In order to allow services to run as quickly and reliably as possible, Redwood's DNX® Converged Services system is designed to deal with millions of inbound or outbound calls, whilst processing service information with 100% accuracy.

DNX features include:



Wide multi-media support

Voice, fax, text and video can be transmitted through the system.

Small footprint with high density

Redwood offers the highest densities in its class, minimising the need for expensive rack space.

Resilient and modular architecture

Duplicated hot-swappable components mean that systems provide high uptimes.

*Award-Winning RedResponse
Mass Calling DNX Platform*

For further information on Redwood's RedResponse mass calling platform and the DNX range of Converged Services systems, please visit <http://www.redwoodtech.com> or contact sales@redwoodtech.com.

Redwood Around the World



CeBIT in Hannover, 9-15 March, sees the start of Redwood's 2006 calendar of events. CeBIT is the world's largest ICT show, with close to half a million visitors in 2005.

Following Redwood's success at Fall VON 2005 in Boston, Redwood will be exhibiting at Spring VON 2006 in San Jose on 14-17 March.

For the sixth year running, Redwood will be

exhibiting at W.Afri.Tel in 2006, one of the most popular trade fairs in Nigeria. The show will take place on 21-23 June.

Please feel free to visit Redwood at any time during these events, or alternatively, please e-mail Sarah James at sdj@redwoodtech.com if you would like to schedule an appointment.

To view Redwood's regularly updated calendar of events, please visit: <http://www.redwoodtech.com/events/events.asp>.

Redwood Releases RedMatrix v4.03 – Audio Conferencing for Next Generation Networks



Now compatible with the Next Generation Network architecture, Redwood's newly launched RedMatrix v4.03 takes the capabilities of its conferencing platform to a new level.

The RedMatrix platform combines flexible conference configuration options with powerful real-time management, co-ordination and reporting tools.

The package supports multiple, simultaneous conferences, in a controlled and scalable environment. Meetings can be set up instantly, or pre-arranged via the built-in scheduling tools. With optional 'listen-only' mode and recording features, conferences can be managed and controlled easily and effectively, providing a complete solution for managed and self-managed conferencing requirements.

Supporting all types of VoIP infrastructures and SS7, E1, T1 and analogue connections, the system allows conferees to call in, or be called, wherever they happen to be, whether at home, in the office, or on the road.

Additionally, RedMatrix integrates seamlessly with Redwood's award-winning real-time billing engine to allow tariffed access to conferencing features.

The latest RedMatrix incorporates a range of

innovative features to further enhance the hugely versatile audio conferencing solution. These include:

One Click Instant Conferencing
Contacts or contact groups are brought together immediately with the 'Instant Conference' option. When selected, specified participants are immediately dialled and added in to a conference, providing instant communication.

Self-Service IVR Scheduling and SMS Notification
Conferences can be scheduled easily and conveniently by telephone using the new 'Scheduling' IVR menu. Notification of future conferences can be provided to participants via SMS - ideal for users on the move.

Secure Registration
New users can register for the RedMatrix service online or via the 'Registration' IVR menu. Once

registered, users can access self-managed conferencing features, subject to the security allowance set by the operator.



RedMatrix Conference Manager

User registration details can also be sent via SMS.

Enhanced Conference Manager
The enhanced Conference Manager incorporates important new facilities, such as a 'lock' mechanism that prevents additional users from joining a conference once all expected participants are connected.

- RedMatrix audio conferencing features:
- > Internet Protocol voice inputs: MEGACO, SIP, H.323 call control
 - > Multi-protocol circuit switching: SS7, E1, T1, V5.2, GSM, analogue
 - > Real-time graphical management control of conferences and conferees
 - > Web-based real-time control for end users
 - > Tariffed audio conferencing
 - > Recording, editing, archiving and play-back
 - > Instant break-out sub-conferences

Additional information on Redwood's RedMatrix audio conferencing application can be found at <http://www.redwoodtech.com/products/redmatrix.asp>.

Alternatively, please contact sales@redwoodtech.com for further details.

Latest Statistics Presented in New Image RedView

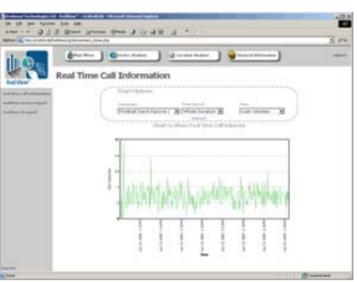


Incorporating the broadest range of service statistics to date, the new look RedView V4.00.01 allows operators and Service Providers to review and analyse even more data than ever.

RedView provides both historical and real-time statistical information for RedResponse, the mass calling application used by some of the world's largest carriers.

Statistics are analysed and displayed in a variety of illustrative format options, including standard and three-dimensional bar charts, pie charts, tables and line graphs. Statistics and criteria can be changed by virtue of pull-down menus, allowing non-technical users to easily obtain management information statistics and compile easy to understand graphs.

Data can be separated into specific groups for targeted analysis. For example, Customised CLI Grouping allows



RedView Statistics Analysis

statistics to be viewed per region or per country.

Each graph type can be easily customised to show basic application statistics such as total calls made and total calls answered, average and total duration of answered calls, and total number of unanswered calls.

The latest RedView additionally provides system operators with the ability to monitor highly detailed service information. The system operator is now able to compare different campaigns and also view new or unique callers – a useful tool for campaigns that require a winner to be picked in real-time.

Another popular new feature is RedView's ability to monitor financial details for a campaign or service in real-time. Users can now watch their profits grow as the number of calls increases. Additionally, financial milestones and targets can be set and monitored.

Additional information can be found at <http://www.redwoodtech.com/products/redview.asp>.

Please contact sales@redwoodtech.com for further details.

The Redwood Team An Interview with Ron Perry, Technical Director



In the first of a series of interviews with members of the Redwood team, Ron Perry gives an insight into his rôle within the company, and his views on technology in the telecommunications industry today.

Based in Redwood's US office, Ron Perry is the company's Technical Director, responsible for the technology strategy that provides new and existing product for domestic and international use.

Since graduating from the University of Massachusetts, Ron has built up over 20 years of software development and senior management experience within the telecommunications sector.

Prior to joining Redwood in 1995, Ron was co-founder and Technical Director at Rhetorex Inc, responsible for the hardware and software development of all products including OEM. As Technical Director, Ron took the company from start-up to annual sales in excess of \$35 million.

Ron, how did you get started in the telecommunications industry?

Ron: I started working in communications back in the early 1970s, being involved mainly in R&D. In those days the systems I worked on were mainframes, but many of the applications were the same as today. For example I developed an IVR front end to the mainframes at Charles Schwab & Co. This allowed customers to start trading over the telephone. In more recent time I was a member of the technical team at Vynet Inc, the company that built the first PC-based voice processing boards, and after that was a co-founder and Technical Director of Rhetorex Inc, the first company to build a multi-channel DSP board for computer telephony. Rhetorex experienced incredible success and led to my involvement in Redwood.

What projects are you working on at the moment?

Ron: One of my key roles as Redwood's Technical Director is to lead our Development Engineering department. This group is responsible for all low level software development. I also oversee our Hardware Engineering group. Development Engineering has recently introduced a Version 5 release of its RTSinfonia software suite. This includes a new RTComposer Service Creation Environment and

RTPerformer® micro-kernel. The Hardware Engineering team has been focussing on new VoIP blades and updated releases are aimed for release in Q1 2006.

What significant changes do you feel have taken place over the last five years?

Ron: When I was with Rhetorex, voice services were always hosted on a server connected to the circuit switched telephone network. The concept of running voice services as IP over a LAN or WAN was considered impractical for anything more than a small number of clients. Today I don't think there is a single carrier that does not have significant projects and investments in operating telecommunication services over an IP backbone.

What technological advancements do you foresee for the next five years?

Ron: We are already seeing increased investment in IP technology. Packing more and more technological horsepower into smaller spaces is an ongoing evolution. Ultimately, I believe wireless technology will dominate Information Services. The opportunities for progressing Bluetooth® in the next five years are enormous at this stage.

What recent technical developments do you feel will be important in the future?

Ron: The flexibility of Redwood's RTSinfonia architecture allows us to be prolific in meeting the demands of the telecommunications and Information Services markets. We have done significant development work for IMS (IP Multimedia Subsystem), the latest service architecture for fixed and mobile communications.

Redwood Sponsorship – Bracknell Half Marathon 2006



Redwood is delighted to announce that it will be sponsoring the next Bracknell Half Marathon, for the third year running.

The 22nd Bracknell Half Marathon is scheduled to take place on Sunday 7 May 2006, with a start time of 09:00 at South Hill Park.

Executive Member for Leisure Services, Councillor Iain McCracken, said: "I am absolutely delighted that Redwood Technologies is continuing as the sponsor of the Bracknell Half Marathon. The race has become a very important part of the local community's sporting calendar, but cannot take place without commercial

sponsorship. I therefore cannot over-emphasise the value of Redwood's contribution to this event."

A record-breaking 914 competitors participated in the last race in April 2005, including members of Redwood's own in-house athletics team, who each completed the 13.1 mile course.

The 2006 race will once again include a team category. Runners that insert a club or company name on the entry form will automatically be entered into the team event. Entry forms will be available from <http://www.bracknell-forest.gov.uk/leisure.htm>. Please contact Sarah James at sdj@redwoodtech.com for further details.

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