

## **Salt Lake Organizing Committee for the Olympic Winter Games of 2002 Information Technology – Project Overview and Update July 2001**

With just seven months to go until the Opening Ceremonies for the 2002 Olympic Winter Games in Salt Lake City, the organizing committee's technology project remains on track. Virtually all of our operational and results systems have been built and delivered to our Integration Lab and venues for testing, the Olympic network is on schedule for an October 2001 implementation, and record traffic levels are being recorded on the official 2002 Olympic website. Of particular note is the successful conclusion of a series of pre-Olympic test events where Salt Lake Organizing Committee (SLOC) Games-time systems and processes were used to stage World Cup and other international winter sports competitions.

The International Olympic Committee (IOC) and SLOC have assembled a consortium of leading companies, most new to the Olympics, to design, develop and operate the technology required for the 2002 Games. Together, we're taking on some formidable challenges. Many of SLOC's most critical Games applications are being designed and built from scratch—a daunting task given the complexities of new software projects and our absolute deadline. Additionally, SLOC and its partners are deploying the largest telecommunications network in Utah and building out the 2002 website to support an unprecedented volume of traffic. These challenges noted, our exceptionally strong technology team, which includes industry leaders like SchlumbergerSema, AT&T, and Qwest, is rising to the occasion.

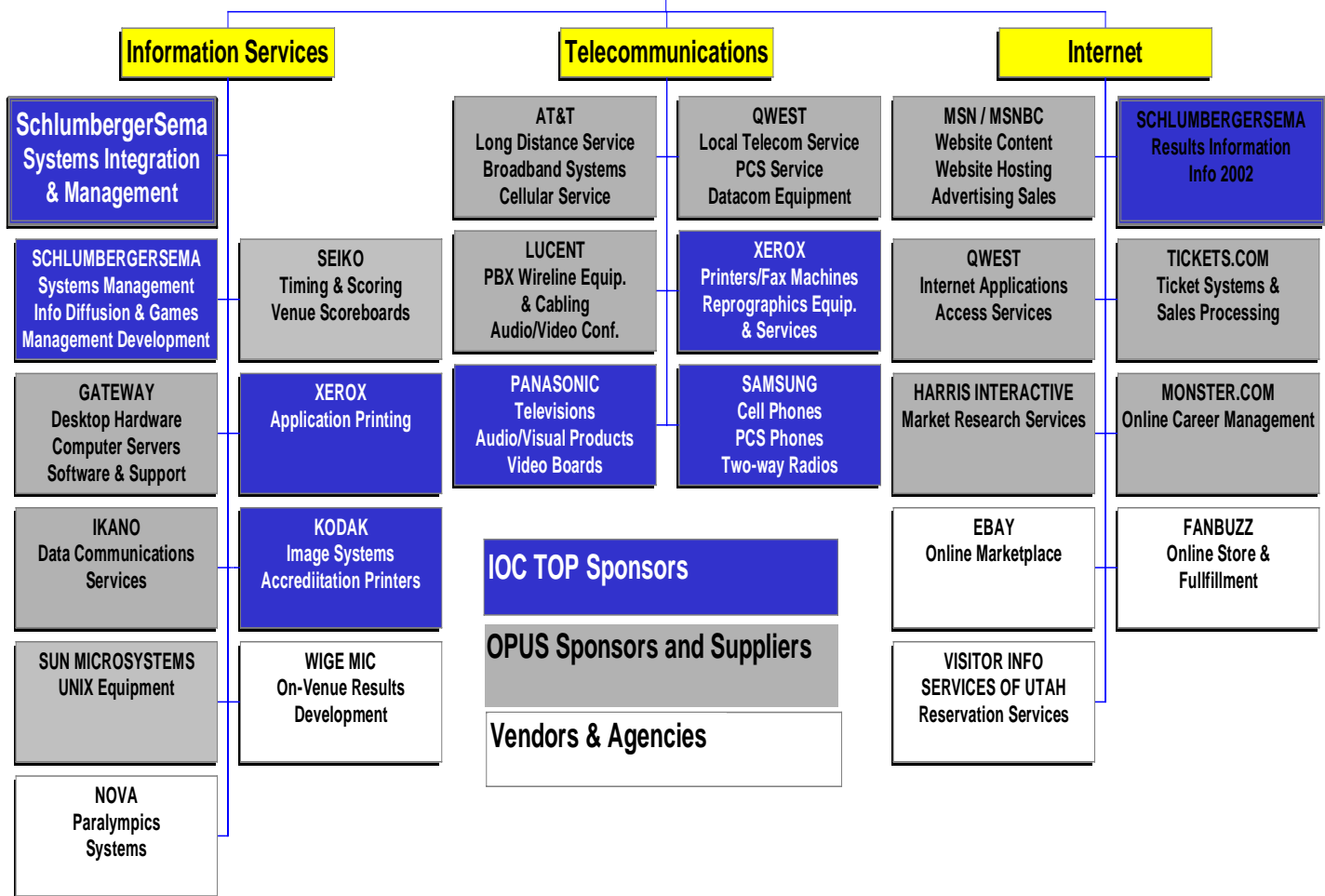
This paper provides an overview of the SLOC information technology (IT) project and an update on technology preparations for the 2002 Olympic Winter Games and Paralympic Winter Games. To begin, here are a few compelling "numbers" and some information on SLOC's consortium of technology partners.

### **SLOC Technology by the Numbers**

32,000	Fibermiles of Optical Fiber Cable
20,000	Tasks in the SLOC IT Project Plans
14,200	Desktop Phones
10,000	Mobile Phones
7,000	Two-way Radios
4,500	Workstations and Laptop Computers
4,000	Televisions
1,850	Fax Machines and Copiers
1,150	Printers
550	Computer Servers
50	Major Application Systems
20	Million Pages of Printed Reports
10	Million Unique Website Visitors
2	Games Data Centers
1	Salt Lake 2002 Information Technology Team



**SALT LAKE ORGANIZING COMMITTEE**  
**Information Technology Project**



**SLOC Information Technology Consortium**

Only a small percentage of SLOC’s technology budget is cash. The remainder is “value-in-kind” (VIK) goods and services provided by our sponsors in exchange for Olympic marketing rights. IOC TOP Sponsors are companies who have entered into agreements with the International Olympic Committee for worldwide marketing rights. Olympic Properties of the United States (OPUS) is the joint marketing venture between the United States Olympic Committee and SLOC. OPUS sponsors and suppliers receive U.S. marketing rights. Without these generous sponsorships, delivering the technology required for the Games would not be possible.

SLOC and its partners have worked very hard to create one unified project team dedicated to a common goal: successful delivery of the 2002 information technology solution. Today, there are about 500 full-time SLOC employees, sponsor employees, and contractors working on the project in the U.S., Europe, and Japan—during the Games, there will be about 2,900, including 1,200 volunteers. As befits an Olympics, the delivery of the 2002 technology solution is truly an international effort. The 22 national flags on display in the 11<sup>th</sup> floor atrium at SLOC headquarters in downtown Salt Lake City identify the countries represented on the IT team.

While we are enormously reliant on our technology partners and defer to them in their respective areas of technical expertise, SLOC has been careful to retain overall accountability and decision making authority on the project. We do not regard any part of the project as “outsourced.” Instead, we have

taken a hands-on leadership role and work proactively with our partners to absolutely ensure the successful delivery of all technology components.

## **Project Overview**

The delivery of all hardware, software, telecommunications, and technology services for an Olympic Games is a substantial undertaking. SLOC's total budget for the 2002 Games information technology project exceeds \$300 million in cash and value-in-kind. The SLOC IT project is composed of many individual sub-projects, each tasked with delivering specific systems, infrastructure and services for the test events and Games.

*Systems Integration:* SchlumbergerSema, a worldwide provider of information technology products and services, is the information services "prime contractor" and has overall responsibility for the planning and control, quality assurance, project management, design, development, implementation, testing, and operation of the 2002 information services solution. SchlumbergerSema has been successfully delivering technology for the Olympics since the 1992 Games in Barcelona and brings an expert team of systems integrators and developers to the project.

*Systems Management:* Another SchlumbergerSema responsibility is the management of all SLOC data centers and staging areas including: the information technology center where all information services operations are managed during the Games; the SLOC integration lab where all applications are installed, integrated, and tested in preparation for deployment at the venues; the PC factory where all computer hardware is staged and configured in preparation for the Games; and the information services central and venue help desks.

*Hardware Deployment and Support:* Gateway, a leader in the PC industry, is providing the workstations, laptop computers, NT servers, desktop and NT software, and associated support services for the Games. Gateway has already deployed hundreds of PCs and NT servers at SLOC offices and venues, the integration lab, help desks, and the SchlumbergerSema development team offices. Qwest, a communications market leader, is providing the data network transport and the data communications equipment required for the data interfaces to Olympic applications. Ikano, a premier Utah technology services company, is providing data network services and support. Sun, a leader in the high-end server arena, is providing all UNIX equipment for the Games.

*Games Management Systems:* SchlumbergerSema is responsible for the design and development of most Olympic applications, including Games Management Systems. These applications are used to support Games planning and operations and include accreditation, transportation, accommodations, arrivals and departures, medical encounters, sports entries and qualifications, Olympic Village planning, and protocol. Many of the Games Management Systems deployed by SchlumbergerSema have been used in previous Olympic Games, including Sydney. Kodak, a longtime IOC TOP sponsor, is providing the imaging solution for the Accreditation System. Several SLOC vendors are providing components for the Games staffing system.

*Info Diffusion Systems:* SchlumbergerSema will also deliver this suite of online applications used by the press and broadcasters, athletes and officials, and other accredited visitors to the Games. Info Diffusion Systems include:

- Info 2002, an intranet application used by accredited visitors to access results data, transportation schedules, athlete biographies, medal counts, weather reports, and other Games information;

- Commentator Information System, a browser-based application designed for broadcasters to retrieve real-time results information;
- Central Repository and Print Distribution, a centralized database of Games and results data used to disseminate online and printed information to the Internet, Info 2002, and other SLOC information systems and users.

*Timing and Scoring Systems:* Seiko, an Olympic sponsor in Nagano and Lillehammer and SLOC's first information services sponsor, is building and deploying highly specialized equipment and systems that will time and score our competitions. They are also providing all venue scoreboards. Qwest, Seiko, and SLOC are partnering to design and deploy the venue cable systems to support the timing and scoring solution.

*On-Venue Results (OVR):* Wige MIC, a SLOC vendor, is leading a team of international sports federation systems providers to deliver venue-based results applications. These systems collect and correlate timing and scoring data, calculate results information, and send it to commentators, scoreboards, and other Olympic systems.

*PBX Systems:* Lucent, a leader in the telecommunications equipment industry, is responsible for the design and implementation of premise-based telecommunication equipment that will provide SLOC with the telecommunications systems and services required for the Games. Lucent also provides SLOC with loaned employees to assist with PBX planning and installation, cable planning, project management, CAD support and financial analysis. In addition, Lucent will provide on-site and remote maintenance, installation and de-installation and project management of PBXs and other equipment.

*Telecommunications Network:* Qwest is responsible for the design, deployment, maintenance and recovery of the Olympic network that will carry voice, data, video, and audio traffic between all venues and offices during the Games. The fiber-based network utilizes SONET (Synchronous Optical Network) technology supplying all venues with alternate fiber routes and redundant electronics. The Olympic telecommunications network will be a five-digit dial network from all venues with no long-distance or message-unit charges. Qwest will also provide the Official Olympic Telephone Directory and approximately 500 supplemental public pay phones at Olympic venues.

*Long-Distance Services:* AT&T is providing all inter-LATA long distance calling services, including domestic and international, over their Software Defined Network (SDN). SLOC will employ three types of SDN access: dedicated, switched and remote. In addition AT&T will provide pre-paid calling cards and "swipe" technology telephones at selected venue locations to provide broader support for long distance calling services. AT&T will perform remote network monitoring 24 hours-per-day, 7 days-per-week. AT&T is also creating an Olympic Calling Center in the Olympic Village that will provide long distance calling services for the athletes.

*Broadband Systems:* AT&T is responsible for the design, engineering, warehousing, installation, maintenance, and recovery of Olympic and Paralympic Games broadcast cable TV services. This system will deliver live video, audio, and real-time communications to all SLOC venues. It will serve all client groups and provide viewers with a total Games experience. The CATV video system will also be used to communicate changes in daily schedules, weather conditions, traffic updates, emergency situations and other vital information to all SLOC personnel over a disbursed geographic region. AT&T will provide three channel lineups varying from 30 to 50 channels that

will include local venue information, channel lineup guides, live coverage of local and remote venue events, broadcast rights-holder video, and daily Games updates.

*Mobile Systems and Services:* The Games will be supported by two mobile telephone service sponsors: AT&T will provide wireless service and Qwest will provide PCS service. Both mobile sponsors are significantly expanding their mobile infrastructure to support the very high wireless demands anticipated during the Games. AT&T and Qwest will support all SLOC operational needs for warehousing, delivery, programming, maintenance, and remote services. AT&T will also provide mobile pager support. Samsung, a leading digital management company, will provide the equipment for wireless applications.

*Radio Systems and Frequency Planning:* SLOC has developed the engineering design for the radio system that will be used to support the Olympic and Paralympic Games. SLOC is partnering with the State of Utah, the Utah Communications Agency Network (UCAN), and the Federal Communications Commission (FCC) to perform radio infrastructure deployment and frequency coordination planning. SLOC is planning to utilize frequencies in the 800 MHz and 150 MHz bands for wide-area and local-area (venue) radio systems during the Games.

*Televisions, VCRs, Camcorders and Audio/Visual Products:* Panasonic, a worldwide leader in consumer electronics, will provide approximately 4000 televisions, VCRs, camcorders and audio/visual products to support the Games. Additionally, Panasonic will provide for the installation, maintenance, and recovery of their video boards and sound systems.

*Document Processing Equipment and Services:* Xerox, an IOC TOP sponsor, is responsible for the provision of all printers (excluding accreditation badging printers), fax devices, copiers, engineering system plotters, and multi-functional devices to support pre-Games and Games-time requirements. The applications supported by Xerox equipment include On-Venue Results, Info Diffusion, Games Management System, Print Distribution, and office administration. Xerox device management software (PrinterMap) will be used to provide monitoring and alerts for all network printers. SLOC is projecting that up to 3,000 digital document processing devices will be installed and operational at Games time. SLOC currently maintains a Xerox-equipped and -operated publishing center capable of producing up to 2 million impressions per month. In addition, Xerox will provide SLOC with loaned employees to assist with the planning, coordination, and implementation of Xerox equipment.

*Internet:* The Salt Lake Games will make more effective use of the Internet than any Olympics in history. In addition to being a key source of Games and sports information, the 2002 website will also serve as an important business applications platform. Visitors to the website can register to be volunteers, purchase event tickets via Tickets.com, and buy SLOC merchandise. Broadcasters, Press, and other accredited visitors to the Games can place online orders for mobile phones, PCs and other equipment and services for use during their stay in Salt Lake City. SLOC has entered into a joint agreement with MSNBC.com and MSN to produce, host, and distribute the official 2002 website. As the official Internet content supplier for the Games, MSN will provide consumers with simple access to exclusive Games content and standings. MSN will use its advertising products and promotions to market the website across MSN. SchlumbergerSema will supply the website with a variety of Games and results information from the competition venues. Qwest will continue its provision of Internet access services and web-based applications. Other contributors to the website include Monster.com who is hosting the volunteer online community, eBay who is providing the online marketplace, and Harris Interactive who is providing market research services.

*Paralympics Systems:* Virtually all of the 2002 Information Technology sponsors are providing equipment and services to the Paralympics project. Nova, a SLOC vendor, is developing the on-venue results, commentator, Info, and Internet systems for the Paralympics.

## **Project Update**

Olympics technology projects have several unique dynamics. While most commercial systems projects can delay implementation when issues arrive, Olympic organizing committees can't slip their deployment dates and don't have the luxury of "working through the bugs" during the first weeks new systems are live. The equipment and applications deployed for the Games must absolutely, positively work on the first day of competition. As a result, our development processes and testing procedures must be well planned and exhaustively thorough.

Systems integration and testing activities are conducted in the SLOC Integration Lab. The lab, managed and operated by SchlumbergerSema and SLOC, simulates the events and processing at all competition and non-competition venues. Timing and scoring simulators generate data that is sent through a network to individual lab "cells" that simulate each of the venues. It is in the lab where all applications delivered by SchlumbergerSema and Wige MIC are installed, integrated and tested. The lab is also used by the IOC, international sports federations and SLOC functions to perform customer acceptance testing. SLOC and SchlumbergerSema opened the Integration Lab in June 2000. It will remain in operation through the Games.

In March, SLOC completed a series of pre-Olympic events ("test events") where our technology infrastructure, systems and processes were used to actually stage world-class winter sports competitions. Among the SLOC systems used at the test events were timing and scoring, on-venue results, Info 2002, Commentator Information System, Accreditation, and Games Staffing. Additionally, SLOC's computing and telecommunications infrastructure were deployed to operate the systems and support the competitions. A total of 17 official test events were conducted at Olympic venues between November 2000 and March 2001 including international competitions in freestyle skiing, cross country skiing, nordic combined, ski jumping, luge, bobsleigh, skeleton, biathlon, snowboarding, speed skating, curling, hockey and figure skating. The test events, while regarded by athletes, international sports federations and the IOC as very successful, still revealed numerous technology and procedural issues that will be addressed during future development, testing, and implementation phases.

The deployment of the Olympic Network remains on schedule. Five venue-based SONET buildings have been installed to date. Along with the fiber infrastructure installed thus far by Qwest, the network is 50% complete. The entire Olympic Network will be completed by October 2001.

Twelve PBXs have been installed at Olympic venues representing 40 percent of the total PBXs required for the Games. To date, required cabling has been installed at 60 percent of the competition venues and 40 percent of the non-competition venues.

SaltLake2002.com, the official website for the 2002 Olympic Winter Games, is experiencing record traffic for an Olympics site this far out from the Games. In June more than 300,000 unique visitors took advantage of the Olympics, sports, and Games coverage offered by the site. Unlike previous Olympics where broadcasters and organizing committees have created separate websites, MSN and MSNBC are working with NBC and SLOC to produce a single site that offers compelling editorial and feature content, detailed sports coverage, Qwest-developed and hosted business applications, and

venue-direct results and Games information from SchlumbergerSema. MSNBC will continue their hosting infrastructure deployments throughout 2001 in preparation for Games-time traffic volumes that are expected to exceed 750 million page views.

In the months ahead, SLOC's technology infrastructure and applications will be put through an exhaustive series of tests, simulations, and rehearsals. Our Version 2 test phase, which began in April, entails the end-to-end testing of all applications and interfaces. In June, representatives from the IOC, international sports federations and press agencies began "Homologation testing," a comprehensive series of tests designed to ensure all systems meet federation and press requirements. Finally, in October 2001 the first of two technical rehearsals will be staged. In these exercises SLOC technology systems, processes and procedures are put through a series of comprehensive scenarios that simulate Games-time conditions. The second technical rehearsal is scheduled for December, 2001. After that, final load-in activities will be performed at the venues in preparation for the events. The Games begin on Friday, February 8, 2002.