

Streaming in Cyberspace - The Webcast Revolution

by Tom Ruffen

THE INTERNET, AS WE KNOW IT, IS on its way out. A child of the 1990's, the World Wide Web is undergoing a profound transformation as we enter the new millennium with text-laden pages moving inexorably the way of the nickelodeon, vaudeville, and silent movies. Just as "talking pictures" changed the landscape of public entertainment overnight, the high quality delivery of streaming media content is making static Web sites look like father's Oldsmobile.

"Streaming" is the continuous transmission of recorded digital video and/or audio content over the Internet, allowing PC users to view or listen to a program in real time, without having to wait for the entire content to be downloaded. The material can be played "live" or can be archived for playback on demand. The herky-jerky images of early streamed video are now being superseded by near-TV quality moving pictures as faster computer modems, increased network bandwidth, and better connectivity ushers in a new era of Internet broadcasting.

Utilizing compression technology and specially designed player software, steamed programming is becoming available to a growing number of PC users. Media rich software such as RealNetworks G-2 Player, Microsoft's Windows Media Player 4.0, and Apple's QuickTime can be downloaded free of charge for use in PCs with baud speeds of 28.8 or higher. Downloading player is the on-line equivalent of connecting a VCR to a TV set. Just as TV audiences can watch programs from their own videotape library, Internet users can now watch or listen to archived webcasts at their own convenience with a few clicks on the browsers.

As founder of Canada's pioneering Internet broadcasting company, Hugh Dobbie knows how Christopher Columbus must have felt on a cold call to the Flat Earth Society. "I'm just happy we're not being laughed at any more," says President and CEO of Interactive Netcasting Systems Inc., a Vancouver based firm more commonly known as INSINC. "We made a huge investment in December of 1995 \$ one that we really couldn't afford at the time, but the opportunity was just so sweet. It was an intuitive thing. Streaming was the reddest apple on the tree, so we decided to go out on a limb. Things were very quiet for a long time, but since the beginning of '99, we've seen the business world really begin to embrace steaming media in earnest. The light has definitely come on in terms of market acceptance. Digital streaming is now growing at twice the rate of the Internet, which is continuing to grow at a rapid pace itself."

"The important thing to consider about INSINC is to use the airplane analogy \$ we're not Boeing, we are United Airlines," says Al Mattrick, Director of Marketing. "It's the difference between flying the airplanes and building them; the difference between using and building the platform and all the proprietary data that goes with it as in the case of RealNetworks and Microsoft Windows Media. We license the player technology so that we are able to run programming content on-demand for our clients."

INSINC owns and operates a complete broadcast production facility, used to netcast 15 different radio and TV programs on its Web sites, DENtv.com and DENradio.com. The company offers more than 60 hours of programming per week, including nationally televised shows such as Investors on Line, Jane Hawtin Live and Dave Chalk's Computer Show. INSINC also offers Internet-only productions such as Around the World with David Ingram and Ozzie Jurock, and Dr. Tomorrow with futurist Frank Ogden, who does his webcast directly from his houseboat in Vancouver's Coal Harbour. INSINC airs its programs "live" but past episodes are archived so that viewers can log on to a show any time of day or night. Operating 24 hours a day, seven days a week, INSINC provides services for a number of radio and television stations, and growing roster of corporate clients. The company has created a remote netcasting unit to produce audio and video broadcasts

outside its studios, making production services available for on-location events. INSINC has presented and archived events such as the World Human Rights Conference from Edmonton, the Banff Television Festival, the Juno Awards and Internet World 99 from Toronto, the Canadian Consulate International Trade Mission from San Francisco, and the press conference for the EXPO 2000 World's Fair, direct from Hannover, Germany. The company is also the producer of BC Children's Hospital's Millennium Countdown to a New Generation, a fundraiser that allows donors of \$5 or more to submit a turn-of-millennium message to CD time capsule.

Headquartered in the Vancouver suburb of Burnaby, BC, INSINC is now planning a branch office in Toronto and another in San Francisco. Currently, INSINC has 12 employees, comprised of the executive team, a sales force, and two categories of technical operators, network and broadcast. Technicians deal with data files and connectivity while system engineers work on the network component. INSINC had its genesis within the Dowco Group of companies founded by Hugh Dobbie, Sr., President and CEO of Dowco Consultants Ltd., an engineering firm established in 1970. The parent company is renowned for its work in iron and structural steel construction projects, including Intel offices around the world and retractable roofs for Toronto's SkyDome and Seattle's new ballpark, Safeco Field.

After graduating from Simon Fraser University, the younger Hugh Dobbie joined his father's firm and developed training programs in computer-aided design for engineering, architectural, and drafting professionals. The success of these proprietary software programs led to the formation of a new subsidiary, Dowco Computer Systems Ltd., with Hugh, Jr. as president and Hugh Sr. as business partner. Then in 1995, the new company identified an emerging business opportunity, the World Wide Web. A new division was then created dowco.com, which is now one of the largest internet service providers in Canada.

"We began as a standard ISP with a business-to-business focus," explains Hugh Dobbie, Jr. "We were serving customers who wanted to register Domain names, customers looking for Web hosting and design, e-mail and e-commerce applications, and so on. Streaming seemed like a good service to offer, and from there, we just took off. The first opportunity for streaming was presented by radio station CKNW. They had a Web site and asked us about re-purposing their Radio signals for broadcast over the Internet. We also had an interesting call come in from radio personality Tom Lucas, who had a music request line show that was aired on 100 stations across Canada. Tom said he would ask people who had called in, 'What are you doing right now?' The most common response was, 'I'm working on my computer.' So, Tom decided he wanted to put his show on the Internet. This was 1996 and it was definitely premature then- the audience wasn't there yet, with so few people at the time with access to the Internet. We're talking about a 5 million channel universe with very small channels and Tom was used to dealing with a coast-to-coast audience. We took about eight months working toward creating the program, The Worldwide Retro Rock Request Show, where people listen on-line around the world and are able to call toll-free into a request line. We continue to do the webcast to this day. The publicity resulting from the request show created some awareness of streaming audio. There was no video at the time, but a lot of people started calling us with ideas."

By 1997, digital media technology had advanced its competencies to make video streaming commercially viable. INSINC was again the vanguard, delivering Canada's first live video feed over the Internet. The Web audience viewed a special video recording of a CKNW radio program Computer Chalk Talk. "When we moved into streaming we went to the entertainment side first, thinking radio and TV programming would be the driving forces, but that's not the case," says Dobbie. "Corporate communications has been where we've found the most interest. As last mile issues are addressed such as broad bandwidth getting to the home, then we'll see more consumer-based applications."

Bandwidth has been a major sticking point for the universal availability of streaming media among Internet users. By definition, bandwidth is the capacity for moving a given amount of data through

a connection at a given speed, usually measured in Kilobits per second (Kbps). A faster modem improves the quality of the streamed content. With business-based PCs generally having superior connectivity as compared to the average home units, the early adopters of streaming media tend to be corporate users. As connectivity will become increasingly consumer-oriented.

"We do a considerable amount of consumer communication and always will continue to grow at a good pace, but the business world is the real driving force behind streaming media," asserts John Rea, INSINC'S General Manager and Vice President. Rea recently joined the company after a distinguished career in broadcasting, and was instrumental in creating the Headline Sports Channel. "The financial market is probably the number one vertical right now in terms of digital streaming. Look at public companies and the requirements they have under regulations for quarterly updates and annual meetings and all the reporting structure. Streaming is natural to meld all the multimedia: the audio, the video, the text, graphics, charts, and tables, and all the numbers, as well as bringing to that the interactivity with on-line chat. Public companies are recognizing the tremendous benefits of communicating through streaming over the Internet.

"We did the streaming for Rogers Cable Annual General Meeting, and it shows there's a great market potential for doing AGMs on the Internet. It's a very efficient way to communicate with shareholders. You can put your meeting on-line. It can be archived and easily accessed by shareholders and potential investors who can view it whenever they like. They can access a speech from your company president or enter into a chat room with investor relations or with your technical experts. Now your corporate video or product video can sit on your home page. You don't have to make an appointment to show it to someone-it's available on-line 24 hours a day."

According to Al Mattrick, whose responsibilities include business development for INSINC, the possibilities are endless. "There are so many applications- from communicating with stock holders to internal training to customer service and product support. Look at car commercials in recent years, the message has essentially been, 'Take a look at our Web site.' Now with streaming technology, you can use computer animation to show all the car's features in detail and compare it to other products, you can even simulate a crash to highlight safety features-the whole area of motion capture and manipulation and transmission of data in digitized format that's facilitated by streaming is really unlimited. You can have a mechanic come on-line and show you how to fix your car. This is a medium that can revolutionize the way we live and work, but the amazing thing is that right now some people still haven't got their head around the fact that the Internet is reshaping the economy and the way we communicate. New technology development like streaming media is a way for Canadian companies to get their message out to world markets.

"Look at how Greenpeace has used the news media to put their spin on issues- they've done it very effectively. Sometimes the resource companies will try to get their story out, but they may run into a certain bias in the established media. With streaming, companies can put their own slant on issues and highlight the things they are doing environmentally and put that message out to people all over the world via the Internet. It's a very cost-effective way to educate consumers at home and abroad. With streaming video it's possible to tell a story in a mass communications format. You present material in a journalistic fashion, but with your own spin on it so you can shape opinion towards your point of view. Even governments are coming around to the idea that they can make their own case accessible to the public outside the context of a media bias."

"Streaming video can be viewed in full screen mode, or minimized into a corner box, so the a PC user can work on the computer while keeping an eye on the video," Mattrick explains. "You might want to watch the news on-line, or a press conference, or any archived program. Or while you're working, you can stream audio, listening to a live broadcast from a radio station, or even an archived program, like a radio talk show that you may have missed when it was on live."

Start-up costs of streaming media are less than \$500 for the first month at INSINC, and a minimum of \$320 per month thereafter, as detailed by Mattrick: "There is a basic set-up fee and a one-time encoding charge as well as a monthly maintenance fee, similar to if you were subscribing to cable TV. Then we have streaming rates, either a basic 1000 access hours per month or a block rate for the year. The more people who access your streamed media programs, the faster you deplete your access hours. Monthly maintenance is \$20 and we sell the client a minimum of 1000 streams at \$300 per month. Basically, 1000 streaming hours means either one hour of programming hours means either one hour of programming going to 1000 PCs or 1000 hours worth of programming going to one P, or any combination of hours and users. We monitor usage, so if your programming is drawing a large audience, we can advise you as to when you are reaching your 1000 hours, and you have the option to purchase more time or have us cut off the stream so you don't get a surprise invoice for more hours than your budget allows. We also offer a block rate where we say to a customer, 'You can buy 10,000 streaming hours for the year,' which is like a bank account—a whole reserve to draw on in terms of streaming capacity. The client covers the production costs of the online information. Most of the programs we broadcast are produced by our clients, although we do have a studio and a production crew to cover press conferences, business meetings, or live remotes and on-camera interviews.

"What we bring to the table is industry strength. When it's mission critical—you have a live performance or live event, there are many elements that need to be brought together to deliver the desired effect. The cable or telephone companies come in and deal with the connectivity and bandwidth, but they don't get involved with the player side or server side or Web hosting. We handle those things as well as the encoding and digitizing, then the streaming itself to deliver the program to your client base.

"The important thing to understand is just because you put content on the Internet which is theoretically available to everyone in the world, it's still up to the client to do the necessary marketing and publicity to drive an audience to the program. We see ourselves as advocates for the streaming media industry, and we want to educate users so they're not turned off by some of the horror stories. We've heard of cases where customers expected a worldwide audience of millions, but only friends and relatives logged on because there wasn't any advertising of the event, so no one knew the program was there. We make our clients very aware of the necessity of building an audience. Over the last 3 _ years we've gained considerable experience in the intricacies of the Web and can advise our clients as to how search engines work and what key works are important in bringing people to your Web site."

"It's very exciting that even though INSINC is just a small core group of people that we're so far ahead of even the big players who supposedly can just step in and buy technology," says Dobbie. "Some of the larger media outlets, radio and TV conglomerates, and major content providers are trying to figure out what this industry is all about. There are a number of complex technologies at work here, so it's not that easy to assemble this capability. Even some major players in the U.S. who have invested over \$100 million in streaming media have had to delay their launch, as in the case of iCast, a company funded by CMGI, and headed by Neil Braun, who used to run NBC."

Last July, the Silicon Valley-based Internet portal giant Yahoo! provided further impetus for the growing phenomenon of streaming media by purchasing the world's largest webcasting company, Broadcast.com for a reported \$5.7 billion U.S. Headquartered in Houston, Texas, Broadcast.com, now operating as Yahoo! Broadcast Services, features programming from 420 radio stations, 56 television stations, and more than 450 college and professional sports teams. Integrating with Yahoo's network production group, the newly acquired company is making rich audio and video content available for Yahoo's global network of 80 million users per month.

"We look at these types of moves as a maturing of the industry, whereby infrastructure is being built through acquisitions and mergers—it's a very positive thing," Dobbie proclaims. "There is more than enough room on the playing field for all of us. Our focus remains on the business rather

than the consumer market in the early stages of our development, and there is enough distinction between us and others involved in netcasting to establish a separate identity."

As the pre-eminent webcaster in Canada and one of the top ten streaming media companies in North America, INSINC has expansion plans of its own. The privately-held company is currently in negotiations for its Initial Public Offering. "The decision to go public is a matter of time-to-market, resources and funding." Says Dobbie. "To get to the scale we want and to embrace the opportunity the way we'd like, we need sources of outside funding, and to that end, we've gone on a number of missions to Silicon Valley and we've established strategic alliances there. We're also looking at Canadian new media partners who have deeper pockets than ourselves. We think we've articulated and defined the vision, so we're looking for equity partners who recognize opportunity.

"As a young start-up company, we've been very reactive in terms of making broadcasting arrangements with people who sought us out. That's another reason why we're looking for funds because we want to develop a marketing division and be more pro-active, particularly in going after corporate business. We're also looking to gain more exposure in terms of public awareness. Right now 49% of people say they have Web access, so we need to reach the other 51%. We need to spread the word about the features and benefits of streaming media, and we'd like to stretch the limits of the medium itself by delivering aspects like superior on-line monitoring and better integration of chat. My interests are primarily in technical enhancements whereas other people in the company are looking at the creative side. What we're doing here is building a structure to empower the creative community to flourish on the Internet. But the whole idea of entertainment in streaming video has caused some misconceptions- producers come to us and they want to be paid for their content, but we're the content distributor and we expect to be paid for delivery, so everybody sits down and says, 'This is going to be great,' and we think they're going to pay us and they think we're going to pay them, and it comes down to, 'Who is going to pay for this great idea?' The industry hasn't evolved yet to where there is an established method of underwriting programs with an advertising model in place.

"I see the biggest risks of streaming media as being on the content side. As a service provider, we're relatively stable as developers of an Internet Protocol based audio and video infrastructure, a vehicle dubbed 'IP brand traffic'-to be relatively consistent and safe. Right now, we're at the early adopter stage of streaming media and only 1% of the market has been penetrated, so it's not a matter of worrying about market turf issues because there's just too much happening. Things are moving rapidly with so many corporate clients looking to embrace this new technology."