Business proposal

Video and audio streaming service

Business proposal
Prepared by
Zoltan Papp

December 7, 2003

---

tel : (512) 785-1412
fax : (512) 692-2824
e-mail : zoli_papp@insight6.com
web : www.insight6.com

Table of Contents page

The network and its effect

4 computers were connected on December 1969 using the IP protocol, the Internet was born. Today, just over 30 years later, more than half a billion people have access to the internet. Among all the nations on Earth, The United States of America has the highest number of users.
Also, on average, the network speed in The United States is at least twice as fast as the rest of the world. Among the 168 million US Internet users, more than 10 million currently have broadband Internet access.

The network is now being used virtually for everything. People with fast Internet access now spend more time online than watching TV. E-mail, shopping, music, images, video, news and on-line banking are among the very few engagements that many people are now conducting via the Internet. It all sounds obvious; only ten years ago it wasn't.

"So what will tomorrow bring?"

The way media delivered to the masses is about to radically change in the next 3-4 years. This change is primarily fostered by the **rapid increase** of **broadband Internet** and **digital cable service** subscribers in the USA, South Korea and Western Europe. The new trend in media is now driven by Internet Service Providers. In fact, ISPs with extended services are in unique position to enter the forthcoming competition of media delivery.

Convergence of technologies and services

The growth I am seeking to harness originates from the convergence of broadband Internet and digital cable service. The Internet is a universal platform with boundaries now stretching at fast food restaurants and on the high ways.

→ The falling cost of broadband connection brings new light to home networking and entertainment.

→ Multimedia technology on both software and hardware side have now become mature for high performance video playback.

→ People accustomed to online payment methods. Banks and online financial services have become widely available. (Etc Merchant accounts, PayPal.com)

In other words, a set of technologies and services have advanced so much during the past few years that a business can be operated on portions of the cost that of few years ago. Not to mention the automated processes that eliminate human administrative work → saves time and money.

Ironically, there is very little or no competition on the market at present.

The Internet is a two way communication medium while the traditional set top boxes provides a one way broadcast flow of information. Not to mention the extra cost of manufacturing specialized hardware for the services.
Even the latest models of set top boxes are far behind the rich functionality of the PC and the speed of the Internet.

If we also consider the number of PCs and point of access to the Internet; it becomes clear how much opportunity and robust market it provides.
The network and the PC is in place, the broadband-based **service is missing**.

A new opportunity

→ **Video on demand** has been around for a while. People can already watch a multitude of channels on digital cable.

So what is new? ➔ **<u>Customer driven service</u>.**

The network empowers people.

People spend a lot of time looking for a channel or program that is of interest to them. Also, show time is fixed and people have to get home on time to watch their favorite TV program, news or movie etc.

There are alternative solutions but none provide the level of functionality and flexibility of pay service of Video on Demand over the Internet; from now on referred to as Subscription Video On Demand (SVoD).

So, what service unifies digital cable and broadband?

Subscription Video on Demand (SVoD) is the pay per view version of Video on Demand. SVoD has a simple payment method so customers will understand on what they spend their money on. It is, I think is of crucial importance at a new service never offered before.

Instead of broadcasting a video stream, SVoD is based on unicast streaming. Also, the technology **extends** the service **from Cable only to any type** of internet connection as long as the downstream speed is sufficiently large enough. This market includes Cable, DSL, Microwave, LAN and the now growing number of Wi-Fi users.

→ **Secure peer-2-peer videoconferencing** for businesses

Conventional telecommunication services became extremely cheap while the business sector is in demand for new ways of communication. Until now, only large corporation could afford specialized video conferencing hardware to save the time, money and hassle of business trips. With the recent advancements in streaming media protocols and the increasing speed of the internet, peer-2-peer videoconferencing has now become an alternative for expensive proprietary streaming hardware. Since the cost of videoconferencing over PC and Internet is dramatically cheaper than specialized hardware, more businesses can afford the service and hence the market is radically wider. P2P videoconferencing has the following advantages:

→ Anytime, anywhere web enabled service and no software or dedicated hardware required

→ Due to location independency, the market is every business connected to the internet.

→ Single implementation can be easily scalable and customizable for large businesses and institutions.

→ Distribution media is the Internet, no warehouse or sales office required.

Summary

The idea is simple, the reasons are simple, the set of technologies to use and integrate are not. The combination of killer technology and business infrastructure is key to success.

Surprisingly, high-performance software technologies are available for free. Due to increasing adaptation of small business and home networking, middle range network equipment vendors such as Netgear are producing high- end medium range hardware products at fractions of costs of mainframe counterparts. Rather than focusing on a single expensive set of equipments, the strategy is now clustering of middle range technology in an error redundant and scalable method. One such example includes RackShack, one of the largest hosting companies; headquartered in Texas. RackShack uses off the shelf components and PCs in a cluster environment to reduce TCO while performing the same or higher level of service to those of whom using dedicated server hardware.

I have been using and writing software for clusters throughout my university studies. I was also specializing in networking and distributed systems on my Masters course in England. Distributed technologies eliminate single point of failure. My goal therefore, is to implement the business as automated as much as possible electronically. This increases ROI and turnaround time. My ambition is fueled by the following factors:

- → High performance software technologies are free and few people know the complete set of technologies that make up a scalable and robust system.
- → Newly emerged services such as PayPal.com, Vonage.com Intuit.com (etc. banking, phone and finance services) became extremely universal at low costs.
- → I am in personal contact with all the people in Austin who are directly related to the service including the Deputy Director of the Texas Association of Broadcasters.
- → Texas has a stable economy and good tax climate. Austin is a growing and vibrant city with a wealth of talent.
- → Although I am relatively young, I had a wealth of experience in living and working with different cultures as well as working with different companies in different countries. At where I am today; I achieved it myself.

Trends

- SVoD is projected to be the **No#1 short-term investment** for cable TV companies.
- According to a study carried out by Nielsen//NetRatings shows that broadband access increased **134%** in the past year.
- The broadband market will reach **35 million** by 2006 according to Jupiter Media Metrix.

Top 10 Cities for Broadband	
1.	San Francisco, CA
2.	Tampa, FL
3.	Boston, MA
4.	Houston, TX
5.	Charlotte, NC
6.	Los Angeles, CA
7.	New York, NY
8.	Raleigh, NC
9.	Orlando, FL
10.	Seattle, WA
Source: America Online	

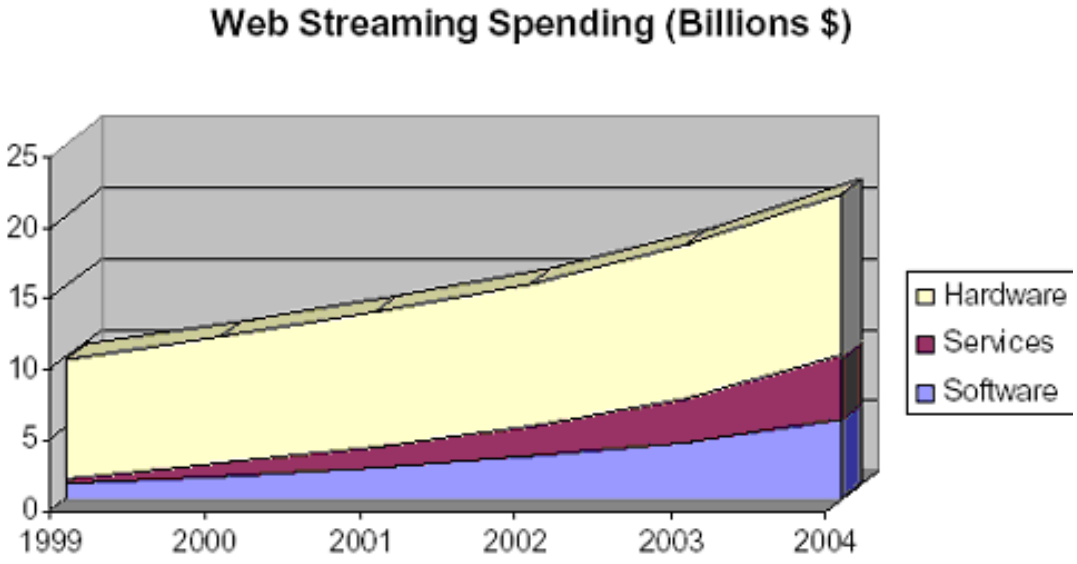
Demographic distribution of broadband users is concentrated in urban areas. Among wired urban areas, the west coast is dynamically growing as the diagram indicates. Obviously, these urban areas offer more lucrative investment and indication of future growth. Top 3 urban areas are concentrated in the Northern West coast of the United States.

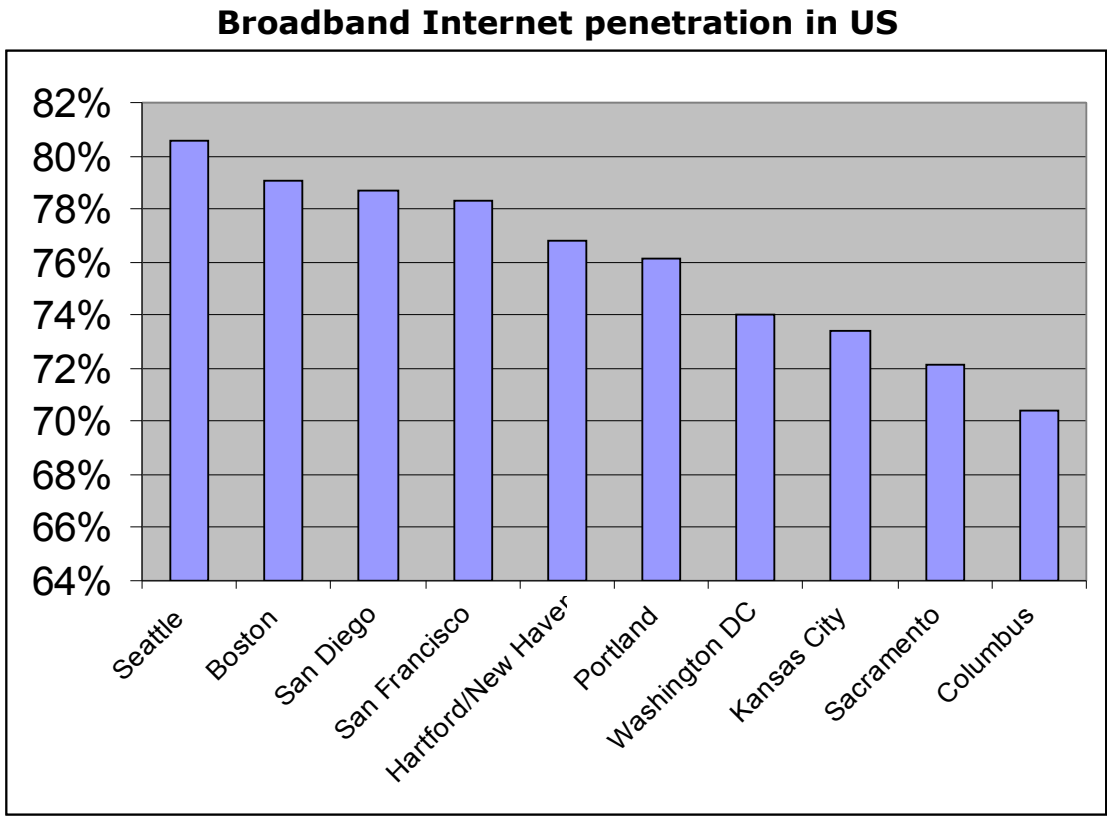
One city has remarkably kept its leading position in the utilization of network technology. San Francisco is way ahead of other urban areas as the following table indicates.

San Francisco vs. Everybody Else		
	San Francisco	**Survey Average**
How many have high-speed at home?	55%	49%
How long have they had broadband?	Almost 2 years	19 months
How many hours per week spent online?	22.4 hours	23 hours

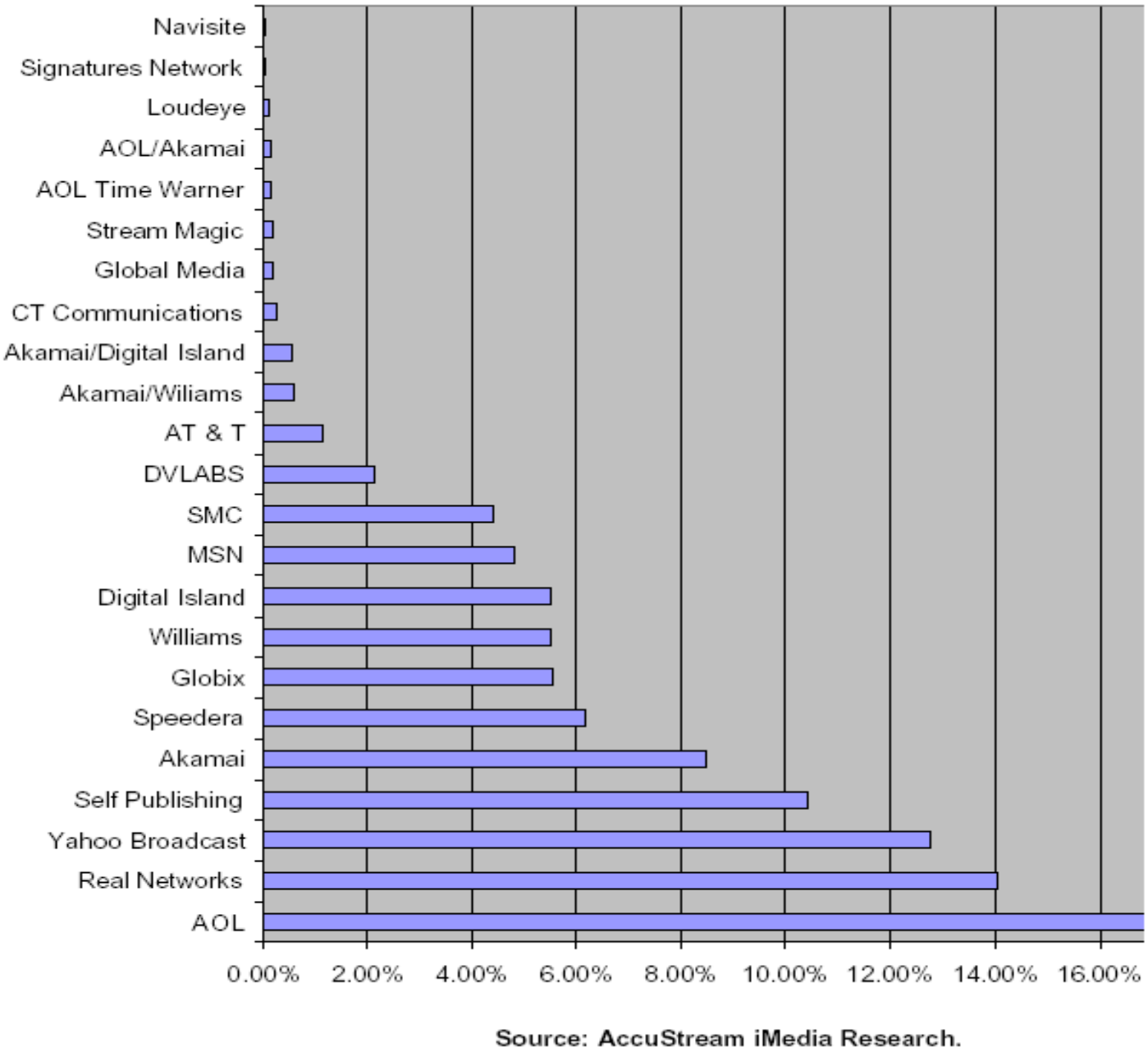
- The streaming media market really began to emerge in the mid 90's when

technologies such as RealAudio debuted and radio stations started putting live and on-demand audio content on the Internet. The growth at first was slow, but the rate of adoption of streaming technologies has accelerated exponentially in the last 5 years. The following graph illustrates this phenomenal growth in streaming related spending and shows that dollar value of all streaming media hardware, software, and services is predicted to more than double in the next four years and will grow to more than a $20 billion dollar industry.





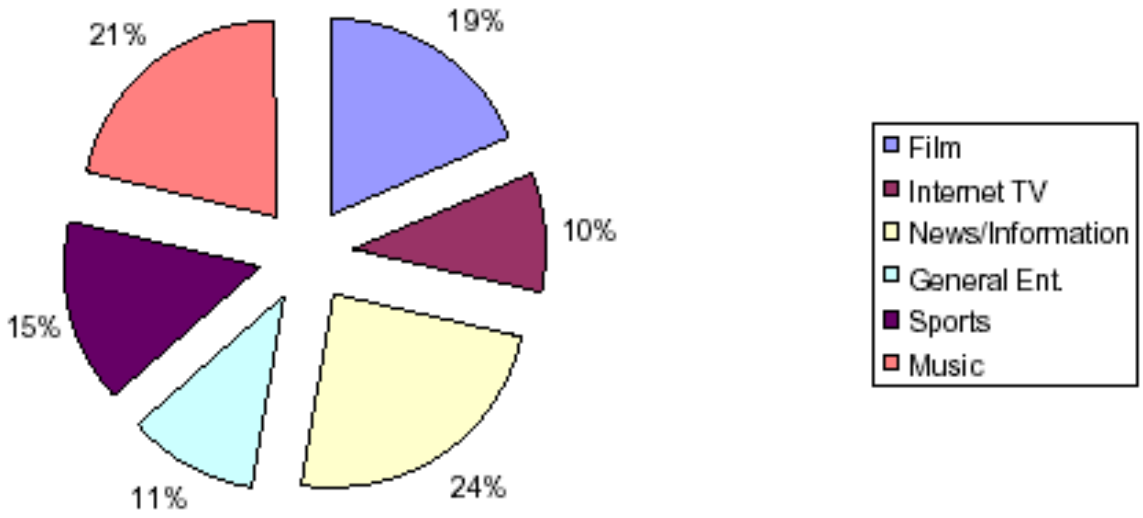
Source: Nielsen//NetRatings



Source: AccuStream iMedia Research.

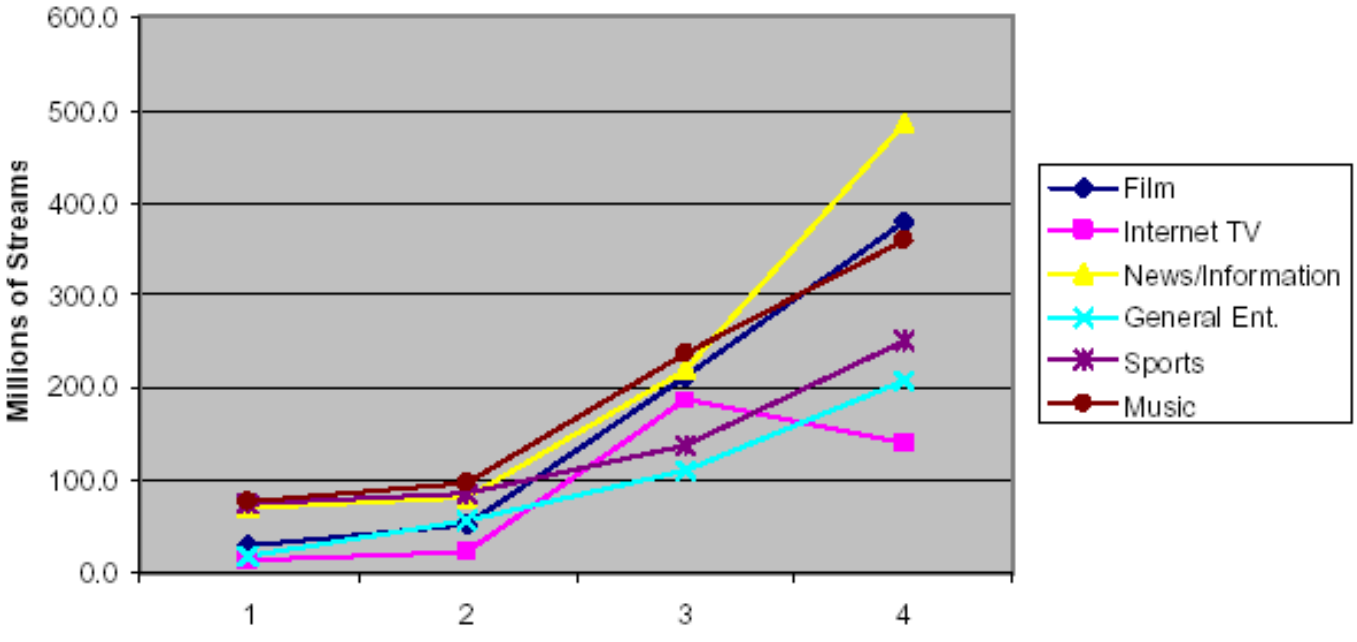
- In a comparison of half year data going back four years, news, music and film rank out as the top three streaming video content categories
- Including full year 1999, news and information streams made up 24% of total streams accessed (on a half year basis)
- Music made up 21% of total streams accessed
- Film made up 19% of total streams accessed
- Sports made up 15% of total streams accessed
- General entertainment made up 11% of total streams accessed
- Internet TV made up 10% of total streams accessed

TOTAL VIDEO STREAMS SERVED AND CONTENT CATEGORY COMPARSION--1999-2002 (half year totals only)



Source: AccuStream iMedia Research.

VIDEO STREAM GROWTH BY CONTENT CATEGORY



1999 through 2002 (Half year totals only)
Source: AccuStream iMedia Research.

- Wireless/802.11 networking now allows the access of broadband services in public areas. This fosters the emergence of new services coexisting with current broadband services. Current speed of commercial 802.11 products is 72Mbit/s. Wireless trend indicates the emergence of the following urban areas

Top 10 cities for wireless connection	
1	Portland, OR-Vancouver, WA
2	San Francisco-San Jose-Oakland, CA
3	Austin-San Marcos, TX
4	Seattle-Bellevue-Everett-Tacoma, WA
5	Orange County, CA
6	Washington, DC
7	San Diego, CA
8	Denver, CO
9	Ventura, CA
10	Boston, MA

- Advertising expenditures in the US broken down by year and industry.

US eAdvertising Expenditures, by Industry Segment, 1999-2005

	1999	2000	2001	2002	2003	2004	2005
Automotive	6%	6%	8%	9%	10%	12%	14%
Computer software and hardware	19%	14%	14%	11%	10%	10%	9%
Consumer packaged goods	3%	2%	3%	5%	6%	6%	7%
Financial services	22%	22%	20%	18%	17%	16%	16%
Health	3%	4%	5%	5%	6%	5%	6%
Media	19%	16%	14%	13%	12%	11%	10%
Telecommunications	6%	6%	6%	6%	6%	5%	5%
Travel	6%	6%	6%	6%	6%	6%	7%
Other	22%	24%	27%	29%	28%	28%	26%
Total online spending	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

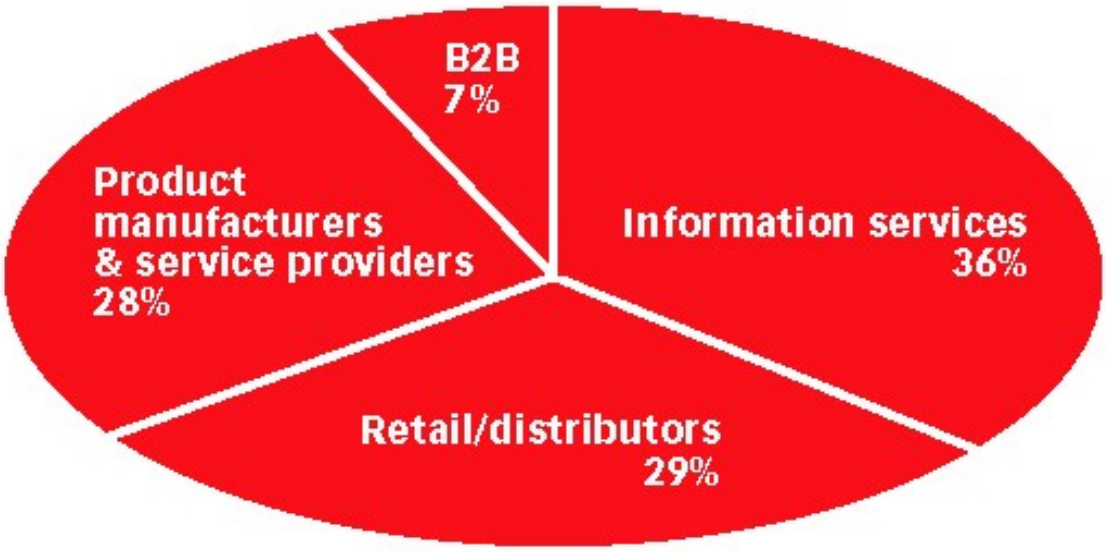
Note: Based on spending excluding Classified Listings
Source: Jupiter Research, 2000

Forrester has projected that the average traditional marketing company will spend about $1.5 million on web advertising by 2003, compared with only $620,000 in 1999. For an average internet-only company, the change is from $3 million in 1999 to $2.8 million in 2003.

According to AdRelevance, even though the number of online ad impressions generated by large companies in the US increased in Q4 2000 from 30 million to 37 million, small and medium-sized firms actually had a higher median number of ad impressions purchased during the last quarter of 2000. This reflects the broadening base of web advertisers and the rapid movement of smaller companies into web advertising.

- Advertising expenditures in the US broken down by industry segment.

US eAdvertising Expenditures, by Industry Segment, Q4 2000



Source: Competitive Media Reporting (CMR), 2001

· Internet radio averaged 83 million aggregate tuning hours per month during the first six months of 2002

· Internet radio sites, destinations, aggregators and channels grew usage by an average of 65+% during the first half of 2002

· With the exception of Clear Channel Worldwide, and several of the major sports leagues and a scattering of major media brands such as ABC and ESPN, most of the hours of usage are associated with Internet-only brands such as Live365, WarpRadio, Radio Free Virgin and the very popular Shoutcast platform, which is an application and platform interface owned by AOL Time Warner

· Along with it its Spinner.com brand, and Radio@aol.com property, AOL is one of the major Internet radio brands and providers on the Internet

· There continues to be some fluctuation in growth patterns for Internet radio, and while the slope is generally positive, streaming radio sites and networks continue exit the market or shutter operations completely

The idea

There are alternative solutions to SVoD but none provides the performance / cost ratio of SVoD over the Internet.
On the other hand, no other solution provides the rate of functionality of SVoD over the Internet.

- **RTSP streaming protocol** (RFC 2326) is used for transmitting video data Over the Internet. This protocol can be streamed over standard HTTP 1.0 protocol on port 80 (RFC 1945) to ensure firewall and other network component compatibility.

- **Streaming** can than be scaled up using a cluster of streaming servers. The lightweight OS image can then be booted from the network (RFC 1542). This allows the use of minimal hardware, space and electricity.

Advantages of using the Internet as a service medium

- Standard communication platform
- Service works over DSL/Cable or any media
- Universal functionality (www, video-streaming, mail etc)
- No extra set top box required
- No extra cabling required

Disadvantages of using the Internet as a service medium

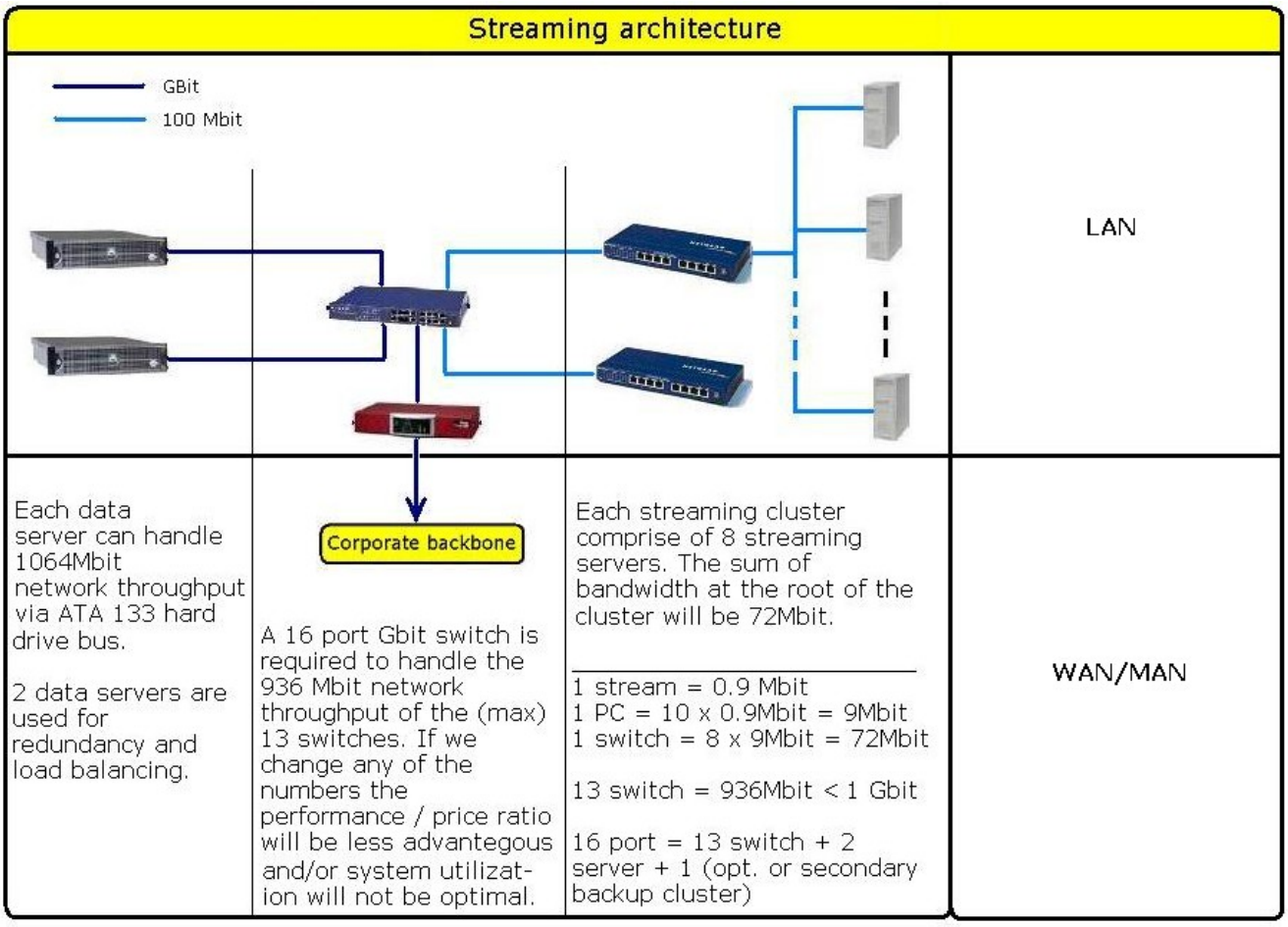
- Bandwidth requirement
- Connecting PC with the TV (remove)

Advantages of using set top boxes

- Dedicated hardware → stable and high quality service
- Already connected with TV

Disadvantages of using set top boxes

- Rigid functionality and scalability
- Only works via Cable
- Extra box required
- Poor interactive experience with service provider
- No keyboard or other input device that is already standard on a PC.



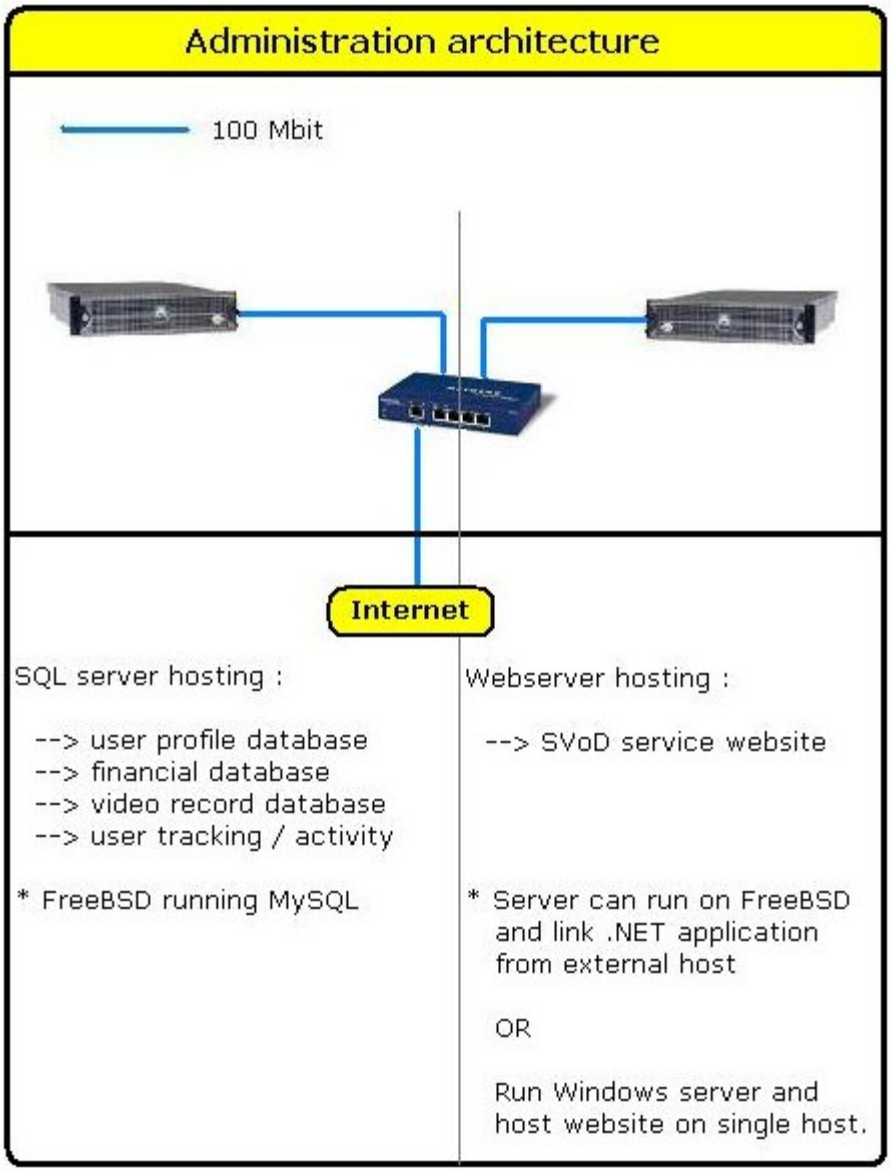
Schematic outline of the streaming data path

- StreamWorks v1.0 web service using ASP.NET
- Web interface provides location and considerable platform independence
- Video on demand service delivered over Windows Media Player (WMP) Web plug in using industry standard Real Time Streaming Protocol (RTSP) to deliver MPEG4 / DivX Video and ACC / MPEG Layer-3 audio stream to the user.
- WMP supports secure streaming to protect privacy and user rights

The streaming architecture can be built from off the shelf components, not requiring specialized hardware or other equipment. Connecting further configurations together based on the figure below can scale current structure up.

→ This increases compatibility with other commercial products
→ Low cost of scalability and maintenance

Total cost of ownership (TCO) of the initial system is $ 10000. It is capable of
→ (data network) → simultaneously streaming of 160 streams
→ (administration network) → hosting FreeBSD/MySQL server and FreeBSD/Apache server (ASP.NET application would be hosted externally)



Schematic outline of the administration network

The data and administration networks are semi-independent networks and are not required to be hosted within the same network.

The administration network (aka web server and SQL server) can be hosted off site. Among the many host providers RackShack in Houston have a solid customer base and competitive prices. RackShack offers both Unix and Windows based hosting, currently introducing data hosting services. This offers a one stop solution for web site architecture hosting.

	Video clips	Long Video	Live Broadcast	P2P
Protocol	HTTP	RTSP	RTSP	SIP / RTSP
Server	Web	Streaming	Streaming	No server
Market	advertising	business	business	business
Notes	Low bandwidth requirement			

- **Comparison of RTSP and HTTP protocols**

Feature	RTSP Streaming	HTTP Streaming
Flash (FLV)	No	No
Flash (SWF)	No	Yes
MPEG-4 (MP4)	Yes	No
QuickTime (MOV)	Yes	Yes
RealMedia (RM)	Yes	Yes
Windows Media (WMV/WMA)	Yes	Yes
Playback during download	Yes	Yes
File stored locally	No	Yes
Requires media server	Yes	No
Transmission bandwidth control	Server	Client/ Network
Transport protocol	RTSP (Lossy)	HTTP (Lossless)
Firewall issues	Might be blocked	Passes through
Random access	At any time	After download only
Length of stream	Unlimited (live broadcast)	Limited (file-based)
Unicast	Yes	Yes
Multicast	Yes	No

Hence, by focusing on clients with large bandwidth demand an QoS, profit margin is maximized.

Hardware requirements of client PCs for streaming video

File Bit Rate:	100 Kbps <	250 Kbps	500 Kbps	750 Kbps	1 Mbps
CPU	PII/300 Mhz	PII/400 Mhz	PIII/500 Mhz	PIII/600 Mhz	PIII/800 Mhz
RAM	64 MB	64 MB	96 MB	128 MB	128 MB
Graphics Card	Standard	Standard	Best with hardware acceleration		
OS	Win 98, Win ME, NT4, Win2000 and Win XP				
Recommended browsers	IE 5.0 + / Netscape 6.0 +				
Supported Media Players	Windows Media Player 9 or QuickTime player				

Why Austin?

Texas is the second largest state in the United States in population. A stable economy helped preserve the business infrastructure during the past 2 years. Texas is home to one of the largest names in IT such as Compaq, DELL, and ComputerUSA etc

About 1 million people live in the sunny Austin area. Home to one of the top intellectual urban areas and best places to live in the country. Controversially, Austin is also home to a large base of IT professionals and a pulsing industry.

- 6% of average Austin unemployment and an estimated 10-25% IT unemployment in the Austin area provides a wealth of technology professionals. University of Austin also supplies a wealth of talent.

- The Austin Technology Council and the Austin Technology Incubator provides help for startups and long term management.

Why now?

Very few people invest or start a business today, so why so ambitious about the risk ?

Secondly, because of many people are paralyzed by the uncertain situation, there are very few competitors.

Now, combining the above two with the recent advancement in technologies such as reliable VoIP, cheap broadband and finance services; the climate is now perfect for growth before the rest awakes. T1 services are available for **less than $400**. Vonage (VoIP) provides **free unlimited calls** in US and Canada for **$42/month** as well as international call rates on **10%** of traditional phone companies.

- The number of broadband Internet subscribers has now reached a critical level into what worth to invest technologies that are based on high speed Internet access.

- Competitors have been paralyzed by the tough economy. Lot of companies didn't invest and laid down talent or sent overseas tech professionals home.
  → Lost potential for growth.

- Streaming media is in its infancy. Nobody provides efficient service for the public, current issues are standardization of protocols and copyright law protection. Although the picture is changing rapidly.

- Although the economy has been tough, growth is projected for this year.

The Challenge

In a rapidly changing industry, fewer companies can maintain their stability. Few recognize the radical change of the economy to harness it for their benefit.

At present, nobody in Austin or in Texas has the technological knowledge, plan combined with the necessary personal contacts and business partners as much as I do.

All resources and knowledge is in place, hence, the challenge is the proper execution of the plan.

Target customers

- **Business 2 Business**

→ secure P2P videoconferencing
→ partner, site-2-site and intranet conference

- **Advertising and media companies**

(newspapers/magazines/advertising agencies)
→ Online advertising, streaming media

- **Broadcasters (Radio / TV)**

→ Streaming live and archived media
→ Tivo, Svod, cable companies

- **Product and service companies**

→ product and service marketing, in-house online advertising

- **Movie industry**

→ Trailers, movie broadcasts
→ Blockbusters, online trailers / movie catalog

I am targeting digital television users whom already subscribe for TV service. The cost spent on digital TV and other services can be replaced by video on demand over broadband connection. Ideal customer base is who already has a broadband connection as well as digital TV. The projected growth of digital television subscribers will grow from 62 million in 2001 to **350 million** in 2006.

According to a study carried out by Nielsen//NetRatings shows that broadband access increased **134%** in the past year. The broadband market will reach **35 million** by 2006 according to Jupiter Media Metrix.

Hence, the **current** potential market is **less than 10 million users**. Video streaming is clearly in its infancy but technology is already available for a considerably cheap price at high performance.

Sales and distribution

→ Strategic partners listed under Business Strategy section are directly connected with the customers themselves. I built the business strategy in a way to keep the interests of the strategic partners while driving the sales.

→ Contacting local representatives and associations of media companies

Competititors

ViewCast in Dallas is No#1 competitor in the region but it is a supplier of real time media encoding cards and its stock price has recently hit the lowest price in its history. Hardware based streaming is more expensive and required specialized cards that need to be replaced as new coding algorithms and streaming technologies come out.

VitalStream in Irvine California has teamed up with Miramax studios for streaming movie trailers and adverts but no SVoD service have been implemented. Similar to ViewCast, VitalStream's stock price is on its lowest price at the moment.

Microsoft is among the first who is supporting streaming media, but Microsoft remains a software supplier rather than solution provider. Just like providing the engine of the car does not make you able to sale the car itself.

TCO

It might sound irrational but high performance software technology is available for free.

- FreeBSD is a free version of the BSD Unix available.

- Darwin Streaming server is Apple corporation's opensource project initiative for high performance video and audio streaming for free.

- MySQL database is a high performance and small, multi-user, multi-threaded client server SQL database for free.

- All network security; monitoring and administration tools can be downloaded free of charge from the FreeBSD ports connection

- 1 Corporate domain server and tools. Microsoft offers free editions for certified professionals and Microsoft Partners.
    - Exchange server
    - File server
    - Backup

Projected growth

The following figures are calculated using worst-case scenarios and are intended for the indication of potential growth.
To estimate size and growth of market, I used Grande Communications, as a live example. I also took into consideration Deloitte & Touch's Texas region evaluation and trend analysis. Growth rate is calculated based on service type and the projected growth by Jupiter research. On average, the potential customer base projected to grow 30%-35% a year.

The national broadband use penetration is <5% among all users with Access to the Internet in the US. The national average of cable usage is <11% among all people in the US. Based on these numbers, the Austin area with 1 million habitants has 50.000 broadband users and 120.000 digital cable subscribers. The potential market in the Austin area is about 30.000 – 50.000 at present. Actually, the Austin area has higher concentration of these services than the national average and the society is of also younger age than the national average.

It is important to point out that although it is possible to sensibly plan for the next 2 years in information technology, the appearance of a new technology in 3 or 4 years (etc holographic storage) could beneficially change the projection.
On the other hand, a serious economic slump (high oil price) would harmfully affect the projection until the company is mature and stable enough to diversify into other markets.

A startup environment is prone to be highly unstructured due to the scale of change. The first 2 years would be primarily focused on expansion while constantly revising the business processes to integrate work flow and production.

Building on the profit of the first 2 years, the 3rd year is an opportunity for diversifying services and offer services in other economical areas.

Overall, the business itself is highly scalable and possible to integrate at high levels. As a result, the more customers sign up the higher the profit margin will be but at higher levels than electronics or other media businesses.
Even more advantageous, the cost of networking technology is radically falling.

Funding requirements

A streaming service can be set up on the client site by having a single PC operating as the streaming Server, a video capture card and a dedicated high speed internet connection.

Basically, the service can be started with $0 investment. The service than later can be developed further to P2P on the profit of the client-server streaming service. Not to mention that every streaming server needs a dedicated high speed internet access with a static IP. All software is FREE.

Business strategy

Potential partners

→ Texas Association of Broadcasters

Oscar A. Rodriguez, Deputy Director

Texas Association of Broadcasters (www.tab.org) the largest state broadcast association in the nation, representing 1,100+ radio and television stations. Oscar A. Rodriguez, Deputy Director of TAB offered his support and resources To bring streaming media to the broadcasters of the state of Texas.

Contact:

Oscar A. Rodriguez
Deputy Director
Tel : (512) 322-9944
Fax : (512) 322-0522
Email : oscar@tab.org

Technology Innovation Group

Dr. Norman Kaderlan, Director

Technology Innovation Group (www.techingroup.com) is a non-profit technology incubator with local and international links and resources to foster technology related business. I have met Dr. Norman Kaderlan at the International Center of Austin (www.fyiiaustin.com) . Norman introduced me to the Romanian Business Incubator Delegate and I have given a presentation upon what both parties established a technology synergy for software development. Dr. Norman Kaderlan was also the director of the IC^2 institue.

Deborah E. Walker,
Principal member of Technology Innovation Group
→ CEO - Deborah E. Walker GmbH, Austria
→ Technology Innovation Group Inc., USA
→ IMI-Innovation Management International Ltd, UK

Deborah E. Walker has been advising the Technology Innovation Group for More than 10 years in the legal and technology area. Deborah has business interests with multi-national companies such as Coca-Cola and has business relations in Central Europe, Austria, England, Beijing China and Austin Texas.
Deborah is currently in Vienna, Austria. I met Deborah at the ICA Open house event and during the Romanian Delegate visit.

Contact:

Dr. Norman Kaderlan
tel: (512) 241-1464
fax: (512) 241-1058
cell: (512) 970-2501
e-mail : nkaderlan@techingroup.com

Deborah E. Walker

Austria Tel: (+43-664) 1 207 208 or (+43-1) 533 5704
Austria Fax: (+43-1) 533 5706
email: dwalker@eunet.at

City of Austin, Media development

Jim Butler
Director of Media development at the City of Austin

The City of Austin's media development program is currently limited to computer and online games. It is due to the fact that Austin hosts numerous game development companies. Jim Butler is interested in taking Austin's media development further by utilizing streaming media, not to mention the gaming industry of Austin. Jim Butler was brought to my attention by Jim Lebkowsky CEO of Polycot.com and also on the Technology Committee Board of the WCIT2006.

Contact:

Jim Butler
Director of Media development at the City of Austin

Tel: 974-6318

Email: jim.butler@ci.austin.tx.us

 WCIT2006 World Conference of Information Technology (www.wcit2006.org)

I am on the Technology Committee Board of WCIT2006. WCIT is organized 2 years and the 2006 event will take place her in Austin Texas. There will be over 1900 delegates coming to the conference in Austin Texas from 90+ countries. The media exposure is over 300 with over 500 million reader impressions.
Being on the Technology Committee Board allows me to meet with technology leaders of the Austin and Texas area and gain insight to the local technology industry.

Mary Martinez, Director of Mexico Trade Center

Mary Martinez is the primary person for fostering business relationship between Mexico and Texas. Although I do not propose to provide
Internet service in Mexico. I am interested in providing the following services:

- It is possible to host streaming servers in Austin and have clients in Mexico
- P2P applications for businesses are location independent
- Mexico is largely un-utilized market from the Texas business point of view.

Mary has a good relationship with a software company in Torreon, Mexico and invited me to introduce the company by going for a business trip, partially sponsored by the Mexico Trade Center. Mary is also interested in joint co-operation with the Technology Innovation Group.

Contact:

Mary Martinez
Director of Mexico Trade Center
Tel: (512) 462-1417
Fax: (512) 476-6417

 Greater Austin Hispanic Chamber of Commerce

I am also the member of the Greater Austin Hispanic Chamber of Commerce (GAHCC). Texas has at least 24% Hispanic population and the GAHCC is among the most active organizations among the Chambers in Austin. GAHCC jointly promote business in Texas with ICA and the Mexico Trade Center.
I have got to know Mary Martinez at GAHCC.

Potential business partners targeted are

→ Innovative Communication Systems, Grace Trevino (www.ics-com.net)

ICS is among the leaders in phone service providers in the Texas area. Having 4 locations in 4 major cities of Texas. ICS provides a strong background For business whom are interested in expanding their communication needs beyond voice. ICS also has VoIP enabled technologies for the utilization of dedicated broadband lines.

Contact:

Grace Trevino

Tel: (512)433-4700
Fax: (512)708-0013
Email : gtrevino@ics-com.net

→ Bantam Electronics, Clifford M. Scott, President (www.bantamei.com)

Bantam Electronics is a supplier of Computer equipment, cabling and networking. Bantam Electronics is a Gold Microsoft Certified Partner and Authorized Dell reseller and manufacturer. Bantam electronics also provides technical support and hardware/network implementation and configuration. Clifford is interested in bringing his business customers exclusively in return for using his Business as a primary supplier for us.

Contact:

Clifford M. Scott
Bantam Electronics (www.bantamei.com)
President

Tel : (512) – 719-3560
Fax : (512) – 580-5120
Email : cliff@bantamei.com

Software development

Outsourcing development projects to the most appropriate team of developers.

→ Streaming technologies

Taco Kampstra, Amsterdam, The Netherlands

Software development team specializes in MPEG4 and streaming media development

→ Website and online applications for streaming services and administration

Andea Valentin, Cluj-Napoca, Romania

Website and online application development team based in Romania

Long term plan

Phase 1 → Growth and Stabilization

The long-term plan is to be the No#1 player in the forthcoming Internet revolution of the media.

Phase 2 → Diversifying and moving to international markets

Once StreamWorks stabilized and built a profitable customer base, my plan is to diversify into the business intelligence software market. I have always been interested in solving real world problems using discrete mathematics. In fact, I wrote both my Bachelor and Master's project in computational discrete mathematics.
Bsc project : "Distributed graph analysis"
MSc project : "Distributed universal process analysis"

Bibliography

ACC

MPEG-4 AAC has been specified as the high-quality general audio coder for 3G wireless terminals. Apple Computer has incorporated MPEG-4 AAC into QuickTime 6 and iTunes 4, as well as the latest version of its award-winning iPod portable music player. The Digital Radio Mondiale system (the next-generation digital replacement for radio broadcasting under 30 MHZ) builds on the audio coding of MPEG-4 AAC. These exciting platforms represent the state of the art in audio coding—and Via Licensing is pleased to offer the MPEG-4 AAC Patent License Agreement.

Broadcast

Any client can watch the same stream

Cluster

Group of PCs or processors connected together to share tasks.
Usually results in higher performance / low cost / scalability

Digital cable

High quality TV service over cable. Requires a set top box that decodes the digital TV channels.

DivX codec

DivX is the most widely distributed MPEG-4 compatible technology available today. DivX technology is compatible with the MPEG-4 video compression standard, allowing it to compress MPEG-2 video down to about one eighth of its original size. DivX is able to create fully compliant MPEG-4 bit streams.

Multicast

2 or more clients have access to same stream,
(etc. prescheduled sharing of stream)

MPEG4

MPEG-4 was defined by the Moving Picture Experts Group (MPEG), the working group within the International Organization for Standardization (ISO) that specified the widely adopted, Emmy Award-winning standards known as MPEG-1 and MPEG-2. Hundreds of researchers around the world contributed to MPEG-4, which was finalized in 1998 and became an international standard in 2000

MPEG Layer-3 audio

A digital audio compression algorithm that achieves a compression factor of about twelve while preserving sound quality. It does this by optimizing the compression according to the range of sound that people can actually hear. MP3 is currently (July 1999) the most powerful algorithm in a series of audio encoding standards developed

under the sponsorship of the Moving Picture Experts Group (MPEG) and formalized by the International Organization for Standardization (ISO).

Unicast
Only one client has access to stream

RTSP streaming protocol
A communications protocol determines the rules of the information between two points on the network. A streaming protocol provides
a set of communication rules to provide smooth playback of
a multimedia stream. RTSP stands for Real Time Streaming Protocol
and it is the most advanced and current standard in streaming technology.

SVoD
Subscriber Video on Demand service. A Pay per view version of the
Video on Demand service offered by cable companies.

VoD
Video on Demand. Cable companies once launched the failed VoD
service. Lack of functionality and no pay per view option.

Wi-Fi
Commercial name of the 802.11 IEEE group of standards that provide
High speed Internet access. Currently up to 72Mbit/sec.

Mr. Zoltan Papp

Digitally signed by Mr. Zoltan Papp
DN: CN = Mr. Zoltan Papp, C = HU, O = Socialist Party of the Republic of Hungary, OU = Civilian diplomacy
Reason: I am the author of this document
Date: 2017.04.29 06:45:50 +02'00'