Service Opportunity - Streaming Media

A proposal for the addition of streaming media services to an existing service line

Joe Hallock
joe@sitedifference.com

August 19, 2005

Web Casting: Context, Concepts & Applications – COM 597
Masters of Communication in Digital Media
University of Washington

Table of Contents

Introduction

This document details several aspects of streaming media services and how the addition of those services might enhance the business model of an existing web/email hosting company – Orange Cable Corporation (OCC). By analyzing the possible customer base (market analysis), the necessary technology, and financial impact, the owners of OCC will be able to make an informed decision regarding the inclusion of streaming media services. This document is divided into five distinctive sections: service overview, market analysis, technology overview, financial information, and conclusion. These sections represent a detailed overview of streaming media services; however, this document is not a proper substitute for a comprehensive business plan.

Service Overview

According to Tim Treanor, CEO - Online Video Service, there are roughly seven server provider models. Some service providers offer all of the following services while some companies specialize in a few.

1. **Encoding** - Encoding involves a lot of computing resources and can have a high barrier to entry for small companies. There isn't a standard for web casting (currently) so encoding companies must support multiple platforms (e.g. Real Media Player and Windows Media Player).

2. **Live Web Casting** – This service is expensive to offer. To steam live events, it's necessary to have a portable (or temporary) Internet connection, an encoding

cluster and a broadcasting cluster. In addition, the service provider that offers this service must also have production skills or capabilities. This model is really the TV of the Internet. Lastly, because this service is hard to offer, customers will tend to pay a premium for the service.

3. **Digital Rights Management** - DRM is very important to those companies that rely on revenue from the content of their video streams (Pay-per-view, Adult content, etc.). DRM services can be tricky and complicated – often involving legal issues and headaches for all who are involved.

4. **Reporting** - Reporting is a service whereby the vendor examines and creates detailed reports on who is watching/downloading the streaming content. This service requires software costs and personnel who have strong statistical skills.

5. **Content Delivery** – Content Delivery was the first part of the industry that became commoditized. This is the process of delivering the content to the viewers.

6. **Consulting** - Consulting can relate to any of the other models and is usually conducted by outside contractors who will come in and help with temporary or one-off online events.

7. **Hardware** - The final model relates to hardware and hardware distribution. This is also a commoditized model and is really owned by the large computer manufactures.

Currently, the facilities and infrastructure at OCC can accommodate additional hardware (servers) and additional bandwidth. Of the services listed above, it would make the most sense to choose services that will fit within the existing infrastructure. Encoding and Content Delivery would fit into the existing framework and will be less likely to force large unexpected expenses. Both of these services would require hardware purchases and bandwidth contracts. These technological and financial aspects will be detailed in the sections to come.

Market Analysis

The market analysis – or overview of possible customer base – is a necessary step in deciding whether or not to introduce a new business or service. The preferred services (encoding and content delivery) are really specific and helpful to a customer base of content producers. People who have already created the digital media and want to pass that content on to their audience. This content can include both video and audio productions.

To develop a count of possible numbers, I've looked local populations of video production associations, television production stations, radio stations and music artist. I'm focusing on local groups because we have a limited advertising budget and would like to meet with our customers face-to-face during the starting phase of this service offering.

Market Segmentation

Our market segments are Video Producers and Audio Producers. See tables below for details:

Video Producers – Seattle Metro:

Animation & Special Effects	4
Corporate & Industrial	4
Post-Production	2
Television	12
Special Events	7
Total	**29**[1]

Audio Producers – Seattle Metro:

Audio Directors – Industry Independent	50
Composers	18
Dubbing Mixers	1
Sound Effects	4
Post Production Consultants	1
Total	**74**[2]

These tables present an overview of the possible number of customers located in the Seattle metro area. We believe that the totals listed above are less than the actual total, but for the purposes of this document they will do.

[1] Yahoo Local. "Washington State > Seattle Metro > Video Production - Yahoo Local" http://dir.yahoo.com/Regional/U_S__States/Washington/Metropolitan_Areas/Seattle_Metro/Business_and_Shopping/Business_to_Business/Video/Production/ (accessed August 14, 2005).

[2] Mandy.com. "Audio Post / Recording Studios in USA Washington State, Seattle - mandy.com film TV production" http://www.mandy.com/4/audiuswa.cfm (accessed August 14, 2005).

The total number of possible customers listed above is 103. This number, although smaller than I had originally thought, represents a good testing ground for this service. Initially we would be selective with the customers we work with. If we decided that the service is worth expanding, we could advertise in locations where video and audio production is more prevalent (e.g. Hollywood & New York).

Technology Overview

The technology required to offer encoding and content distribution services is very similar to the technology used to deliver other forms of web content. This section describes, in basic terms, what technology is needed to provide the aforementioned streaming media services.

Hardware:

1. **Encoding Servers** (quantity = 2)
   Encoding servers convert the video/audio files into files that can be played by media players. We plan on encoding media into both Real and WMP accessible files. This will require two servers – both purchased at the same time and having similar, if not exactly the same, hardware configurations. The new servers will need multiple processors, gigabit Ethernet network cards.

   System Configurations[1]:
   Intel Xeon processor (dual) 2.8GHz
   4 GB or more RAM
   64-bit PCI-X RAID Controller
   400 GB Hard drive (2)

   Cost - ~$2,500.00 (each)

[1] Doering, David. 2005. Ten tips for choosing a great streaming server. *Streaming Media Industry Sourcebook - 2005*. January.

2. **Content Distribution Servers** (quantity = 4 (2 for each encoding system))
   Content Distribution servers deliver content to the Internet audience. Without any real experience, it is tough to tell how many distribution servers will be necessary. We'll assume that our customer will have approximate figures. Again, we'll assume that our first jobs will be small and controlled. With that stated, we'll purchase 2 distribution servers for each encoder. These servers will have higher storage capabilities and will automatically load-balance spikes in bandwidth.

   System Configurations[1]:
   Intel Xeon processor (dual) 2.8GHz
   4 GB or more RAM
   64-bit PCI-X RAID Controller
   400 GB Hard drive (4)

   Cost - ~$3,000.00 (each)

3. **Network Switch**

   A network switch with remote login and diagnostics is needed to connect the 6 severs.

   The switch we'll acquire will run at gigabit speeds. A comparable switch is sold by

   Linksys for ~$150.00.

[1] Doering, David. 2005. Ten tips for choosing a great streaming server. *Streaming Media Industry Sourcebook - 2005*. January.

Software:

1. Windows Media Server 9

   This software package is free and includes encoding software and distribution software. The software does run on Windows Server 2003 (which does require purchase – approximately $700 for each license (newegg.com))

2. Real Network's Helix Server ('Connected Server' version running on FreeBSD)

   This software package is about $2000 and will cover both of the distribution servers and the one encoding server. However, there is a 10,000 simultaneous stream limit.

Financial Information

Simply stated, the purpose of this service is to generate income. In order to obtain quality customers and provide a quality service, it's necessary to purchase the necessary equipment. This section summarizes the financial impact of starting this service. I've included hardware, software and bandwidth charges. Personnel charges are not included.

Hardware Costs:

Type	Quantity	Unit Price	Total
Encoding Servers	2	2,500.00	5,000.00
Content Distribution Servers	4	3,000.00	12,000.00
Network Switch	1	150.00	150.00

Software Costs:

Type	Quantity	Unit Price	Total
Windows Media Server 9	2	-	-
Windows Server	1	700.00	700.00
Real Network's Helix Server	1	2,000.00	2,000.00
FreeBSD	1	-	-

Bandwidth Fees - Monthly recurring

Contracted Fee	200	3.00	600.00

Total Costs **$24,450**

Bandwidth charges are relatively low because of existing bandwidth purchase contracts already in place with FiberCloud (the current data center vendor). In addition, rack space for the servers is already available at no extra charge. OCC currently has 12 open rack units in the Everett PAE location in an under utilized rack.

Conclusion

This document detailed several aspects of streaming media services and how the addition of those services might enhance the business model of my existing company. After analyzing the market analysis, the necessary technology, and financial impact, I can clearly see that the decision to add this service will be difficult.

At first thought, the financial barrier to entry seems high. After learning more about the service, we may be able to save some money on servers and/or the number of servers we purchase. Moreover, we could decide to only offer Windows Media Player streams. This would lower expenses because we wouldn't have to purchase the Real Networks Helix Server.

There's no doubt that streaming media services are part of an up-and-coming trend in digital media. However, I personally believe that the underlying business, managed server hosting, is where one might see more opportunity. There might be an opportunity to provide data center services to a streaming media company – thus taking a step upstream in the content delivery side of the business.