



Innovative Systems Expands IPTV Offering

Taking advantage of the APMAX hardware platform, Innovative Systems is now in a position to offer multiple solutions for telecommunications companies delivering video through IP. In addition to IPTV Middleware, the APMAX is now able to provide Video Stream Monitoring, Video Streaming, Ad Insertion (future) and Video Encryption.

Ryan Tupper, Director of Voice and Video Services says, "We are excited about this major expansion in our video service product line. It gives hundreds of our APMAX voice service customers the option of adding specific IPTV services like Video Monitoring to their existing APMAX." Tupper adds, "It's important from a cost perspective to add software to an existing platform in addition to working with the same support group. Customers need to know that the APMAX can provide other IPTV solutions without having the Innovative Systems IPTV Middleware service."

The Video Stream Monitoring service gives providers real time signal status of their video quality and can be easily monitored by your technical and CSR staff from their PCs. Multiple parameters can be set to identify specific problems with your video streams. Historical review allows better monitoring of those intermittent video quality issues.

Upcoming Events

February 8- 9, 2011
eLation Staking & Mapping
User Meeting
Mitchell, SD
[Click here to register](#)

February 13-16, 2011
NTCA Annual Meeting and
Expo
Dallas, TX

April 19- 20, 2010
eLation Spring Billing &
Financials User Meeting
Mitchell, SD

August 30- 31, 201
APMAX Voice and Video
User Meeting
Mitchell, SD



Video Streaming Service is provided by the APMAX and streams TS video files to specific channels. This service can be applied to everything from video user guides to local content on one or more of your channels.

The ability to use the APMAX for local ad insertion is in the development process with rollout expected sometime in 2011.

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APMAX User Meeting

This year's APMAX User meeting was held August 31st - September 1st, 2010 at the Highland Conference Center in Mitchell, SD. This year's event was re-vamped with special sessions on the first morning of the meeting.

A special IPTV Users meeting was presented which drew from the current base of Innovative Systems IPTV Middleware clients. During this session, best practices including big screen demonstrations were conducted followed by peer presentations detailing some of their best practices for deployment of the IPTV Middleware. A question and answer period at the end generated positive discussion about the continued progress with the IPTV product line.

Also on the first morning of the User Meeting, APMAX voice customers were given a segment of the popular APMAX Advanced training class at Innovative's corporate offices. A near capacity group received tips and techniques from Innovative's lead APMAX voice services instructor, John Cersosimo. John discussed, "Who's Calling Now?? - Using APMAX to Control When and If the Phone Will Ring (TCM)."

In Part two of this session attendees heard the presentation, "Look Who's Talking - Using APMAX to Manage Outgoing Calls (OCM)." Both of these training sessions received high evaluations and we will evaluate other topics from the monthly APMAX training classes to present at next year's annual meeting. If you would like more information on attending one of the monthly APMAX advanced training classes click [here](#).

By popular demand the product showcase was back again with a focus on new enhancements to Notify Plus, OCM and Unified Messaging.

Innovative's Mike Murdock also delivered a well received presentation on the future of SIP device provisioning and how there will be business opportunities for telcos looking to expand their service offerings.

Mike's presentation was a prelude to the upcoming Automated Configuration Service (ACS) which will be in beta testing starting this quarter. For a look at the ACS product sheet follow [this link](#).



IPTV attendees viewing APMAX DVR Web Portal



Product Showcase provides live demos of APMAX Services

Introducing the APmax SIP ACS

- **Taming the complexity**
 - The variety of device manufacturers, models, firmware revisions, feature options and customer specific configuration details calls for a managed network approach to SIP device provisioning.

Mike Murdock made a case for Automated SIP Provisioning



IPTV Lessons Learned and Future Considerations

By Roger Musick

(Editors Note: The following story contains excerpts from a story running in the current issue of the OPASTCO Roundtable Magazine, for the unedited version follow this link.)

Checked History

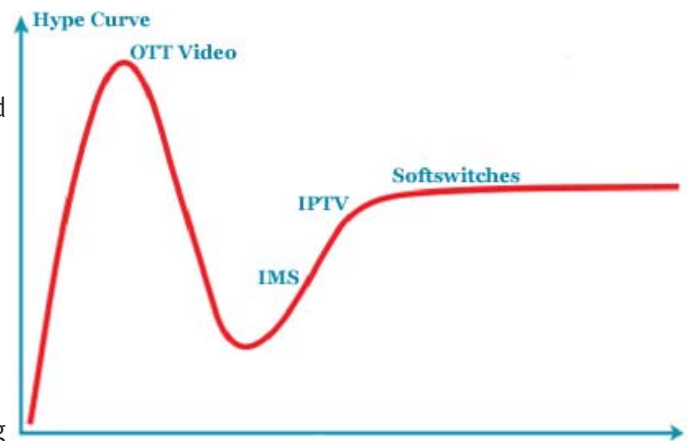
In the early years, packet video service offered by the Tier 3 providers was reasonably simple and reliable. It was based on standard definition TVs, MPEG 2 encoding, the ATM protocol and the reliability of a single supplier- Next Level Communications. The Next Level Communications solution included the local loop electronics, middleware and set-top box (STB) hardware and software all from the one supplier.

Then the industry began evolving from ATM to “IP everything.” Motorola saw that the Next Level platform was not a long term solution and decided to “end of life” the platform, as the industry began the move to IPTV.

Do you remember the presentations with slides of softswitch, OSS or video solutions composed of 10 to 20 blocks, with each block representing a unique vendor? It was the age of hyping the “Best in Class” model, where multiple vendors would be magically integrated to provide a total solution.

With no single vendor solution available, the IPTV market had no choice and gave the “Best in Class” model a try. With many of the IPTV suppliers being small startup companies with little history of delivering long term, carrier grade solutions, and developing products for an industry with few standards, IPTV had the cards stacked against it. Systems that rely on many individual products from multiple vendors configured together can easily fail if one supplier’s effort falls short.

Besides issues of survivability when using multiple vendors, also overlooked can be the amount of interoperability testing required for multiple vendor solutions to operate reliably and continue to work as new features are added to the software or hardware. Often the middleware cannot be upgraded until Set-Top box vendors A, B and C can all support the new middleware. Is it any wonder that the IPTV industry has a reputation for lack of compatibility and finger pointing between vendors?



Early HD and MPEG 4 stood for “High Dollar Problems”

After a few years of very marginal IPTV solutions, by the mid-2000s the industry was finally learning how to operate standard definition, MPEG 2 systems. There was no encryption, DVR or other applications, there was a relative calm. But nothing in our industry stays static for long, and the CATV and satellite competitors began a fast migration to High Definition. The content providers required encryption and the higher bandwidth required for High Definition mandated a transition from MPEG 2 to MPEG 4. The early MPEG 4 encoders had major issues as did the early HD STBs.

Eventually, the chipset vendors were able to deliver the promised chips required for the STBs, a number of the encoder, encryption, middleware and VOD vendors left the market and the remaining vendors started delivering a better product and the transition from MPEG 2 to 4 has become reasonably successful in the late 2000s.

How many different STBs can we put in a network?

Over the years, companies decided to deploy STBs from multiple vendors in the same network either because they were tired of one vendor’s problems and finger pointing or they could buy what they perceived as a better STB at a better price from a second or third vendor. What was overlooked was when a new release of middleware was available all of the STB types had to support the new middleware before the system could be upgraded.

Lessons learned and the takeaways

It is good to look back and see what we have learned about IPTV over the last decade. My six lessons learned from the history of IPTV in the Tier 3 market are:

See ‘IPTV Lessons Learned’ continued on page 8

Citizens Telephone Company of Kecksburg PA Installs eLation



For over 100 years Citizens Telephone Company of Kecksburg has been serving residents of Southwestern Pennsylvania with telecommunication services. Up until 1996 this rural ILEC was providing dialtone, but were forced to get into video and data because of competitive offerings by multiple companies in their exchange. With the addition of more services their billing system at that time would be challenged to provide customers with a easy to understand bill.

Prior to switching to eLation, Citizens had to deal with three separate billings and when they started bundling their services the bills that the customers were getting were somewhat difficult to decipher. According to Arnold Cutrell, General Manager, "Once customers started receiving bills processed by the elation billing system, they were actually starting to read their bills which translated into inquiries and more responses to messages that the software can incorporate into the bill. These responses also assisted our marketing department's efforts in selling Citizen's products and services. Cutrell adds, "eLations ability to effectively manage the bundles in the billing has really been a major improvement for our company."

Citizens Telephone.... at a glance

Headquarters:

Mammoth, PA

Service Area Includes:

4,200 Access Lines

2,000 Data Customers

2,500 Video Customers

Market Type:

**Rural ILEC Incorporated
Since 1906**

Conversion Expectations

Management at Citizens envisioned the conversion process to be much more challenging than it actually was, Cutrell stated that the pre-conversion training and support was key. After just four billing runs the company implemented a billing increase to their bundles with no hiccups. Citizens management has seen many significant operational changes over their history and it was felt that this conversion was the most successful big "change" that they had ever experienced.

New Tools Have Proven Useful

The reporting tools have been well received by the staff at Citizens for the various needs of their company. In addition to the template reports, the ability to receive support and training in creation of customized reports has been quite helpful.

Citizens, like many companies these days, is delivering fiber to the home and on the mapping side their old system's service addresses didn't provide the outside guys and the linemen enough information to find some of the houses, requiring quite a bit of clean up, but the eLation mapping has been helping them with that task. Looking back on their old mapping system, where putting effort into it didn't yield much in the way of results, that same effort now is showing measurable results and is increasing productivity.

Support Report Card

Citizen's predecessor OSS was an AS 400 system that had reached end of life and even though the support was less expensive the responsiveness and ability to add new enhancements just wasn't there. eLation receives a good grade from the support perspective according to Cutrell, with same day if not same call responsiveness.

Continued on page 5.....

eLation Staking & Mapping User Meeting Will Reveal Exciting New Enhancements!

Innovative Systems will be hosting the eLation Staking & Mapping User meeting February 8-9, 2009 at the Highlands Conference Center in Mitchell, SD.

According to team leaders there will be a shift from the concurrent session format to a single session format for the 2 day meeting.

Innovative Systems CEO, Roger Musick will present a state of the industry address and discuss the importance of integration for the Tier 3 operators.

If all goes as planned there will also be a special video presentation that will be geared toward the Staking & Mapping attendees!

Schedule at a Glance

February 8th

1:00 - 1:30pm Welcome with CEO, Roger Musick
 1:30 - 2:30pm Did You Know ?
 2:30 - 3:15pm Installs, Upgrades, Updates, Back-ups and Server Connections
 3:15 - 3:30pm Break
 3:30 - 4:00pm Import/Export Management
 4:00 - 4:30pm What's new in AutoCAD 2010 and 2011
 4:30 - 5:00pm Open Discussion and Q&A
 5:30 - 7:00pm Social Hour and Dinner at the Highlands Center

February 9th

8:00 - 8:30am Continental Breakfast
 8:30 - 9:30am Mapping New Features & Enhancements
 9:30 - 10:15am Advanced Search
 10:15 - 10:30am Break
 10:30 - 11:45am Billing Integration/Linking
 11:45 - 12:00pm Open Discussion and Q&A
 12:00 - 1:15pm Lunch
 1:15 - 2:15pm GPS Captures and Data Collection
 2:15 - 2:45pm RUS changes to the 515a
 2:45 - 3:00pm Retiring Cable Plant in eLation Mapping
 3:00pm End of Meeting

[Click here for full agenda and to register](#)

eLation in PA

...Continued from page 4

Benefits of Point and Click

For some of the more seasoned Citizens employees coming off of an AS 400 menu driven format presented a challenge initially, but a Windows based environment is where everything is heading and Citizens management knew that this was the way to go. The new format also provides more options increasing the functionality and ultimately more efficiency and productivity.

The added benefit of the point and click environment provided by eLation was a great help for the younger employees and will prove to be beneficial down the road should there be a need for hiring new staff. Windows based systems are becoming so common in the workplace that moving to one allows a company to put new people "online" with customers much faster than ever before.

Integration with Voice Services

Cutrell commented that another factor in choosing eLation was the ability to tightly integrate with other Innovative Systems products. Having been a customer with their voice services has been a positive experience and that comfort level of doing business with one vendor for multiple pieces of our telecom operation is really unique to the industry.

APMAX Marketing Materials Available

If you are new to the APMAX and would like some helpful information on services, there is a resource library on the support side of www.innovsys.com From the home page, follow the client access link where you will be prompted for a User ID and Password. Once you are logged in click on the APMAX Marketing Materials tab to find a list of specific services. Included here are customizable user guides and help videos. If you don't know your User ID and Password contact APMAX support at 605-995-6120.

Upcoming Innovative Systems User Meetings

Staking & Mapping User Meet
 Highland Conference Center
 February 8-9, 2011
 Mitchell SD

**Agenda & Registration
 Now Available!**

eLation Spring User Meeting
 Highland Conference Center
 April 19-20, 2011
 Mitchell SD

**Agenda & Registration
 Coming Next Month**

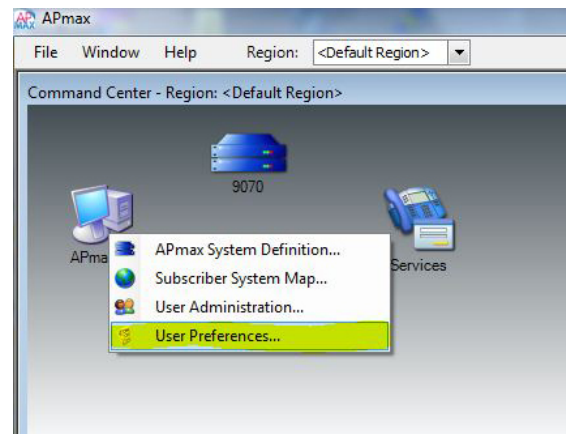
APMAX Annual Meeting
 Highland Conference Center
 August 30-31, 2011
 Mitchell SD

**Agenda & Registration
 Coming in June**

APMAX Minute - Subscriber System Map

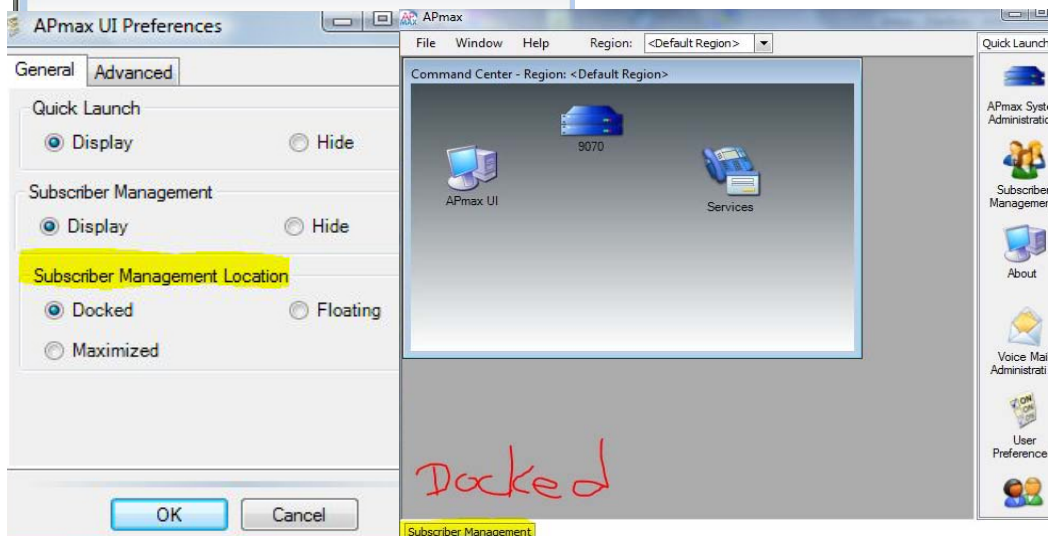
by APMAX Support Team

The APMAX Minute is a monthly tip distributed via email for APMAX Customers. It provides quick tips for your technical staff regarding the use or maintenance of the APMAX system and services. If you are not currently receiving the APMAX Minute and would like to, please send an email request to scottm@innovsys.com and you will be added to the distribution list.



The APMAX UI has gone through some major changes on how to administer the subscribers, and their services. Previously, the CSR would have separate windows to open up, and they would eventually have three or four windows open to manage a subscriber's service. Development has consolidated these windows and tabs together to allow a streamlined flow. Over the next few APMAX Minutes we will take a look at some of the enhancements that can maximize your APMAX UI based on your needs.

The first UI enhancement we are going to look at is, Manage Subscriber Window Location. APMAX users can decide and manage their location of the Subscriber Management window by right-clicking the APMAX UI icon and selecting the User Preferences...command.



This window will allow the user three options for the Subscriber Management window.

I prefer to have the Subscriber Management window location docked at the bottom of the software, then I always know where it is located if it does not appear on the program.

Marketing Minute - Evaluate Your Resources for New Revenue Streams

by IS Marketing Dept.

The Marketing Minute is a monthly marketing tip distributed via email for Innovative Systems Customers. It provides quick tips for your marketing staff regarding the telecommunications industry. If you are not currently receiving the Marketing Minute and would like to, please send an email request to scottm@innovsys.com and you will be added to the distribution list.

As I scan the Telco websites of our customers, I'm starting to see more and more service offerings that are a departure from the traditional voice, video and data services. How many of you are doing Internet security, home security and PC sales and maintenance? Probably quite a few. Now how many of you are doing automated SIP device provisioning. How about digging and trenching contract work? I think the idea here is to get involved in things that you already have some skill at as a company that can generate additional revenue. One of our customers sells prepaid wireless phones.

The logical starting point is to create a list of assets in equipment, facilities and personnel. The second point to consider is regional need for things that you could provide, and the third point is to evaluate how much competition there is for what you would be offering. It also makes sense to start talking to some of the biggest fans of your company and find out what else they would buy from you.

Will there be a day when your company may have an employee or group of employees whose job is to develop future products and services perhaps not yet identified by consumers? If this does happen, there will be things that will never make it out of the "lab", but if there is a consistent effort you will increase the odds of hitting a home run with that product or service that others would say, I wish I would have thought of that! The other benefit of developing new product and service offerings is the fact that people will start to notice the effort and your company will gain a reputation as an innovator.

APMAX in 2011 - Service Road Map

2010 was a busy year for the Innovative Systems APMAX development team with new feature developments in both IPTV (see page 1) and APMAX voice. 2011 will see significant service enhancements to existing voice services as well as some new services that are worth investigating as possible new revenue opportunities for your company.

Service Enhancements for 2011

Voicemail 5.0

(see adjacent box)

Firebar

Recorded firebar name

Web portal access to recordings option

On-Demand Conferencing

Changeable Conference IDs

Multiple Conference IDs per subscriber

Temporary Conferences

Downloadable Billing Records

Multiple Language Support

Notify Plus

Improved performance (96 ports)

Audio Recording IVR support

Basic mode with call, record and send feature

Support for email addresses in lists

Support for text message option

Enhanced reporting on job status with CSV option

Web Portal Administration

Single Number Service

Support IVR enable/disable service

OCM/Budget Toll/Account Code Management

Hybrid OCM Service, 3 in one

Terminating Call Manager

Integrated TCM/Do Not Disturb (DND)

Support 3/6/7 digit blocking patterns

(block all 605-990-xxxx calls)

Unified Messaging- Roadmap for 2011

VM 5.0 in Beta Now

Voice to Text Translation powered by YAP

MMS Notification to Cell Phone

MP3 message encoding

Text Only notification (no attachment)

Integration of Auto Attendant with ACD

Ability to move mailboxes and preserve messages

Message Playback Order for Saved and New

Messages (First In First Out, First In Last out, etc...)

Two New Services for 2011

Automated SIP Configuration Service (ACS)

By utilizing the existing APMAX User Interface the service provider can set up the provisioning and management of the individual subscribers SIP networks. Follow this link for a product description.

Automated Call Distribution (ACD)

The APMAX provides an intelligent, feature rich call management platform to support inbound and outbound customer care and telemarketing operations. APMAX IP delivered agent and supervisor dashboards are included as well as detailed report features. Follow this link for a product description.

APMAX Innovsurance - Do you have it?

Innovsurance will cover any upgrade costs to the services that you have purchased for your APMAX. Please contact your APMAX Account Manager if you don't already have this cost effective coverage. The APMAX design allows for significant enhancements to existing services in a short amount of time and Innovsurance will give you the opportunity to take advantage of new service functionality.

Extended Warranty Program Available for Qualified APs

For those of you who aren't ready to upgrade your Application Peripheral (AP) hardware platform to an APMAX, for a limited time there will be an opportunity to warranty your qualifying AP for up to 24 months. As an added incentive to upgrade to an APMAX, you will receive a credit that will go towards the purchase of an APMAX at any time during the 24 month warranty period for your AP. Please contact your Account Manager regarding this program.

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IS Booth Packs Them in at Telco TV in Las Vegas

Thousands of IPTV decisions makers and technicals converged on Sin City for the annual Telco TV event with visions of seeing the latest and greatest in IPTV and possibly an escape from below freezing temps. As it turned out the attendees received a healthy dose of both particularly on the IPTV front.

The Innovative Systems booth was busy during the entire time that exhibits were open. The reason behind Innovative's best Telco TV show ever, live demos of real apps that worked!



Attendees were able to see Innovative's latest Middleware development that includes Whole Home DVR, a new Weather App allowing on-screen current conditions and the Android Wireless App that allows subscribers the ability to control their DVR and TV channels from a wireless device.



The big buzz at the show was Over the Top (OTT) video devices and attendees were scouring the show booths to find out more. Aminos Freedom STB looks to be a promising player in OTT STBs and attendees were able to take a look at one of them at the Innovative Systems booth.

As was the case in 2009, the rumors of another major player pulling out of the Tier 3 IPTV space became a reality when a large Fortune 500 company decided to exit the middleware business. This announcement left many wondering, "Whos next?", only adding more credibility to our feature story, IPTV Lessons Learned, and CEO Roger Musick's advice to be very selective in choosing your vendor partners and carefully scrutinize their commitment to the rural telecommunications market.

If you want someone added to this email list or if you would like to be removed from this list send your request to scottm@innovsys.com.

IPTV Lessons Learned

...Continued from page 4.

1. Reduce the Number of Vendors Involved in your Solution: Choosing a few reliable vendors that supply, work together and take total responsibility for the IPTV system will reduce your risk. Large enough to deliver, but small enough to care about your business. Read the latest news, large public companies come and go from the Tier 3 market almost as fast as startups.

2. Less is More: By greatly limiting the number of STB brands in your network you can provide more features and reliability. The STB is the largest investment in most IPTV systems, so make sure the STB you deploy is supported by your first, second and third choice middleware provider.

3. Buy the Company, Not the Product or the Salesperson: IPTV ecosystem decisions are major investments that will affect your company's success over the next 10 to 20 years.

4. Have Your Hype Filter on High: Our industry is famous for over-hyping new technology. In the late 90s the Internet growth was so over-hyped it created one of the largest booms and busts in modern times. Everyone wants to present the latest and greatest and pretend or hope it will work great. Always have the "Hype Curve" in your mind and think where the product or service being discussed is on the hype curve.

5. IPTV is Financially a Challenge, but Required: IPTV has proven to be not only a technology challenge but also a financial challenge for Tier 3 telephone companies. Deploying IPTV systems that are reasonably priced and easy to deploy, upgrade and support can go a long way to improve your ROI. Systems that minimize truck rolls will have a very significant impact on the cost to maintain IPTV.

6. Simplicity is King: When considering your IPTV ecosystem, it may be wise to consider this quote from Ray Ozzie, Chief Software Architect at Microsoft Corporation: "(system) complexity kills. Complexity sucks the life out of users, developers and IT. Complexity makes products difficult to plan, build and use."

Working with the middleware vendors in the early 2000s to deliver Caller ID Screen Pop, started our interest in entering the Tier 3 IPTV market, but the early and mid-2000s IPTV development was in such disarray we did not think we could successfully integrate with the early ecosystems. We now believe VDSL, FTTH, middleware, STB, MPEG 4 encoders and encryption systems have matured to a point allowing the Tier 3 IPTV market to provide a compelling and competitive service.