



**Live Streaming Coverage of Events
With
Vazzt[®]™ Video-On-The-Move
(VOTM)**

Frequently Asked Questions (FAQ)

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-- Frequently Asked Questions --

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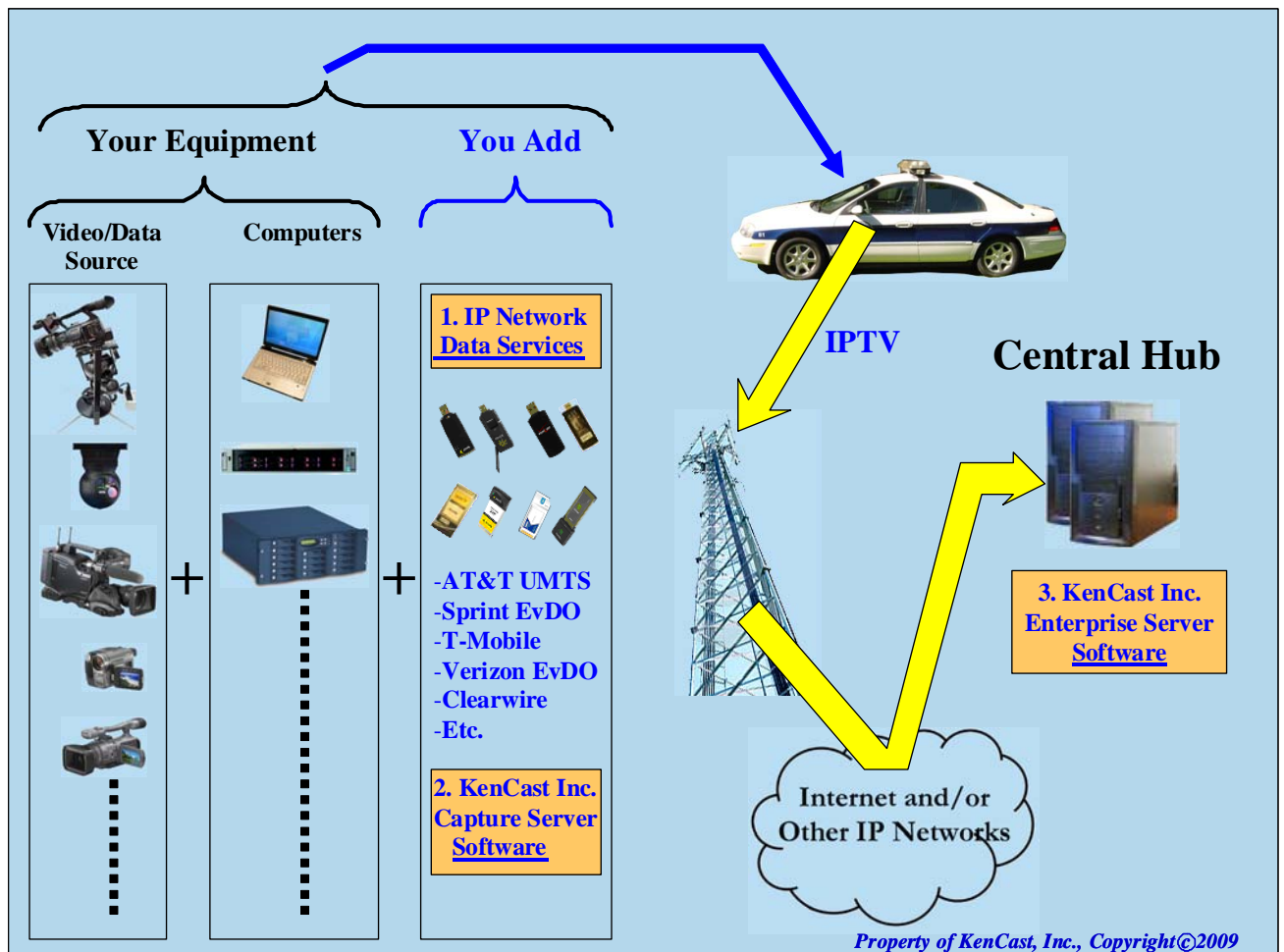
What is Vazzt Video-On-The-Move (VOTM)?

Vazzt VOTM is a software application from KenCast, Inc. that enables you -- while on the move in a vehicle, in an aircraft, or on foot with a camera connected to a laptop -- to send live video streams and video files to your central hub. Vazzt is a complete end-to-end solution. Vazzt provides the video encoding, network pipe, video decoding and playout capability. You can also pass the live content on from you central hub to users on the Internet or on private networks.

What do I need to get started with Vazzt VOTM?

You need to add 3 things to your computers and Internet resources:

1. Wireless IP network services: directly from a carrier (e.g., Sprint EvDO, Verizon EvDO, T-Mobile UMTS, AT&T UMTS, etc.) or a WISP (Wireless Internet Service Provider) or your own private network (WiFi, Bluetooth, fiber, etc.) connected to the Internet
2. The Vazzt Capture Server software (to send the IPTV or file) on each of your laptops or notebooks or computers
3. The Vazzt Enterprise Server software (to catch the IPTV or file) on a server computer at your central hub and this server must have Internet access



You can broadcast from a vehicle, an aircraft or on foot from your location to your central hub with this setup.

Whick 3G & 4G IP Networks and Aircards can I Use with Vazzt?

What IP Networks can I expect to bond together with Vazzt?

You can bond together “any” IP Networks that can carry IP traffic, wired or wireless. These include 3G/4G, Satellite, fiber optics, terrestrial Internet, etc. If it can carry IP traffic, Vazzt can bond it.

There are a variety of 3G USB Wireless Keys that are provided by telco carrier services to enable operation. These cards can often work immediately with Vazzt VOTM. Some cards required manually setting parameters to work with Vazzt VOTM. We can recommend at least the following cards:

Some USB Wireless Keys tested and compatible with KenCast's Vazzt. August 18, 2010			
Wireless Key support by operator			
Operator	Product	Maker	Model
	T-mobile webConnect USB Laptop Stick	HUAWEI	UMG181
Verizon	Verizon Wireless USB760 Modem	Novatel Wireless	USB760
	Sprint Novatel Wireless U727	Novatel Wireless	U727
	Verizon Wireless UMW 190 Global USB Modem	Pantech/Curitel	UMW190
AT&T	AT&T USBConnect Lightning	Sierra Wireless	UB 305
	Compass 597	Sierra Wireless	

Maker	Model	Firmware	Driver	Default		Target		Note
				Vendor ID	Product ID	Vendor ID	Product ID	
HUAWEI	UMG181		option	0x12d1		0x12d1	0x1414	
Novatel Wireless	USB760	v114	option	0x1410	0x5020	0x1410	0x6000	Must be Firmware v114
Novatel Wireless	U727			0x1410	0x5010	0x1410	0x4100	
Pantech/Curitel	UMW 190		cdc-acm	0x106c	0x3b05	0x106c	0x3716	Needs patch
Sierra Wireless	UB 305		sierra v1.20	0x1199		0x1199	0x68a3	
Sierra Wireless			sierra	0x1199		0x1199	0x0023	

Can I use Vazzt on IP Networks in other parts of the World?

Absolutely, you can use Vazzt anyplace in the world you find an IP Network. Vazzt has already been used in places such as the UK, in Japan, in South Africa, and other countries. Vazzt works on ANY wireless or wired network that can carry IP traffic for which you are authorized, regardless of what you call it -- Sprint EvDO, Verizon EvDO, AT&T

EDGE/UMTS, T-Mobile EDGE/UMTS, Clear's (formerly Clearwire or XOHM) WiMAX or other WiMAX, WiFi, BlueTooth, WLAN, Satellite, GSM, HSCSD, Tetra, iDEN, GPRS, LTE, 3G,....

In UK: O2, Vodafone

In Japan: UQ (WiMAX), E-Mobile (HSPA), PHS, NTT DoCoMo (HSPA), XGP.

In South Africa: Iburst, Vodacom, Telkom and MTN

Etc.

How many IP Networks can Vazzt's Capture Server software support from a laptop?

There is no theoretical limit to the number of IP Networks that can be bonded with Vazzt. The practical number of bonded networks depends on the number of data services in a given location for which you are a subscriber and the number of ports on your laptop. It is possible on an upper end computer to bond 8 or more networks. On an upper end laptop, 5 or more.



Does use of Vazzt VOTM require coordination with carriers?

No. As long as you are an authorized subscriber to one or more carrier services, Vazzt will bond them together for you without coordination with your carriers.

How can I find Carrier data service coverage in my area in the USA?

See extensive EvDO Coverage for USA: <http://evdomaps.com/>

For specific Carriers:

1. Sprint EvDO

Sprint Coverage Tool:

http://coverage.sprintpcs.com/IMPACT.jsp?id16=Coverage&covType=sprint#_highlight

2. Verizon EvDO

Verizon EvDO Coverage:

<http://www.verizonwireless.com/b2c/mobilebroadband/?page=coverage>

3. AT&T UMTS

AT&T Coverage: http://www.wireless.att.com/coverageviewer/popUp_3g.jsp

4. T-Mobile UMTS

T-Mobile Coverage: <http://coverage.t-mobile.com/default.aspx?MapType=Data>

5. Clear WiMAX

Clear Coverage: <http://www.clear.com/coverage>

Carriers are now competing vigorously. This is generating two benefits for users. First, the geographic coverage is expanding continually. And second, periodically the bandwidth provided in current third generation services is stepped up to higher levels by the carrier.

In addition, carriers are preparing new, faster types of services. More than one carrier is likely to begin to rollout out fourth generation LTE data services, and competitive WiMAX is already advancing. These 4G services will replace current 3G services with substantially higher bandwidth. Vazzt VOTM can immediately take advantage of more coverage, faster service, and new 4G IP network services as they arrive.

Can I also send files, any files, using Vazzt on these IP Networks?

Yes, Vazzt will protect, and secure any file you wish to send to the central hub. Vazzt typically will send files back to the central hub with acceleration that is much faster than typical FTP delivery. This is of great value in time sensitive applications such as news gathering. The Vazzt retransmission of missed file content, even after local FEC repairs, ensures flawless delivery.

Are there any constraints from the FCC or other USA regulatory body regarding bonding?

No.

What is different about KenCast's Vazzt VOTM offering?

There are now scores of solutions appearing to meet what till now has been a huge hidden market for video capture from the field. Although almost all users capturing video from the field already have a camera and laptop, these solutions often require the user to add another heavy box or backpack, or they are very expensive services, or lock the user to a set of carrier services or specific IP network(s), or require the user to pass their captured video first through the vendor's service center before it is sent back to the user's own central hub, or require viewers to download a plug in –or all of the above problems.

KenCast's solution avoids all of these problems. The Vazzt solution is

- All-software based – NO HARDWARE REQUIRED
- Playback on any user device without KenCast software/plugins – NOTHING required from KenCast
- Agnostic to wireless IP Services and allows the user to employ 'any' wireless IP networks of his/her own choice and to change them as often as he/she chooses, or finds it necessary, and to do so immediately/on-the-fly
- Amenable to a new IP network service as soon as it is available
- Ready to support an enterprise that wants to set up its own complete wireless video capture capability, from the field to its own central hub, with full security on the streaming video and on the files, without passing captured video through any third party. Vazzt creates and configures endpoints for a Virtual Private Network.
- Adaptable for organizations so inclined to set up a Video Capture service to compete for this huge market with the scores of current competitors.

And Vazzt VOTM software is inexpensive. PERIOD!

What kind of camera do I need?

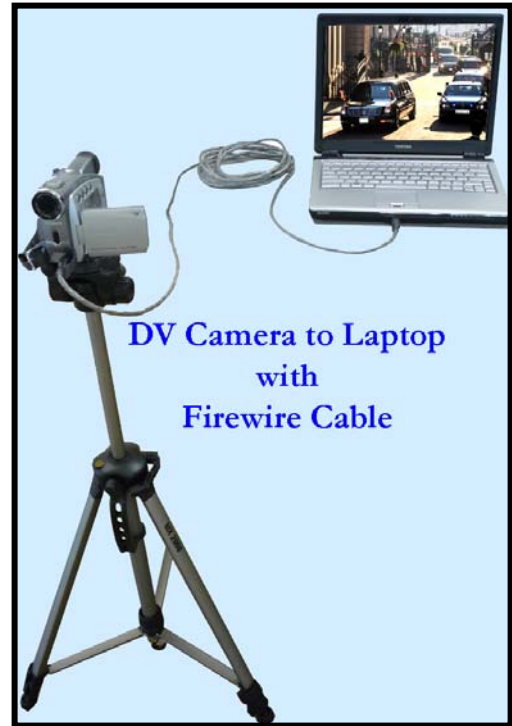
Vazzt will work with almost any camera on the market, with analog or digital output. You can use an HD pro camera with SDI output, a prosumer camera with HDMI output, a DV camcorder, an external web cam (e.g., Logitech), or even the internal webcam in your netbook (it works fine). The quality of the video will vary with the quality of the camera. At the upper extreme is an HD pro camera with live output to a laptop, in which case the camera setup can get very expensive, as well as more complex – but it works well with Vazzt.



How do I attach my camera to my laptop?

There are many ways to attach your camera to your laptop. For digital camera output, we recommend connecting the camera with a wire to the faster firewire port – but the USB port will also work. As an example, for analog camera output you can use an external capture device with a 3-port composite connector into the camera and a USB connection on the other end of the cable into the laptop. Also, there are many ways to interface a camera to an internal video capture card. See illustrations below:

All Firewire port connectors lack a latch. These connections can disconnect from the camera and/or the laptop, which can be a problem for a user on the move.
The External Capture Devices typically rely on a more secure 1-plug connector to the camera, or 3-plug connector to the camera, and a USB connector to plug into the laptop. They are easier to work with when capturing video on the move.



Some devices that will enable you to connect your camera's analog output to a digital port on your laptop are: Dazzle, Easycap, and Roxio.



What resolution can Vazzt give me?

The Vazzt encoder that comes with the capture software can now encode at anything up to and including Video at 1080p (1920x1080 pixels, 30 frames per second, with 65K color). The camera/laptop can be very simple and inexpensive for standard IPTV, but expensive for a full HD IPTV configuration.

Vazzt Capture Software will automatically read the default video resolutions available from the camera you attach to the laptop/computer with the Vazzt Capture Server software. It will present these options to you. Typical options include the following and can be used in these typical setups:

- (320x240) For the Capture Server use a netbook with built in webcam, subscribe to 2 carrier wireless data services at \$60 per month each (\$120/month). There is no other recurring cost for the capture server operation. You can also bond together WiFi and other IP network services, when available, with the 2 carrier services to get higher resolution, but webcams do not yet have higher resolution capability.
- (720x480) Use a laptop for Capture Server with a prosumer camera and 3 carrier wireless data services for only about \$180/month recurring cost.
- (1440x1080) Use a good laptop for Capture Server with a pro camera and 6-7 carrier wireless data services for excellent bandwidth for about \$360/month recurring cost.

However, at this upper resolution you will also need multiple new carrier IP Networks (LTE and/or WiMAX) to get enough bandwidth to support this quality resolution – in the range of 2.5-4.5 Mbps). Currently you may need a server-class computer and a broadband wire connection to the Internet to use the Vazzt Capture Server software at this resolution, until multiple 4G networks are available to be bonded together.

Resolution Available for Coverage with the Vazzt VOTM Service

When using the Vazzt VOTM Service, the resolution you select will depend on the amount of bandwidth detected by the *VazztCaster* program and the options that the Vazzt *VazztCaster* program automatically detects in your camera.

There are 4 types of cameras on the market today: HD cameras; HDV Cameras; DV Cameras; and Webcams. The maximum resolution these cameras offer are as follows:

Standard	Resolution	DAR	Pixels
HD Cameras:			
Sony HDCAM SR (1080)	1920 × 1080	16:9	2,073,600
HDV Cameras:			
Canon Vixia HV40	1440 × 1080	16:9	1,555,200
Panasonic DVCPRO	1440 × 1080	16:9	1,555,200
Panasonic DVCPRO HD 1080, 59.94i	1280 × 1080	16:9	1,382,400
Panasonic DVCPRO HD 720p	960 × 720	16:9	691,200
DV Cameras:			
D1 PAL	720 × 576	4:3	414,720
D1 NTSC	720 × 486	4:3	349,920
DV PAL	720 × 576	4:3	414,720
DV NTSC	720 × 480	4:3	345,600
DV NTSC	360 x 240	4:3	86,400

Webcams, aka USB Cameras

“Most consumer webcams are capable of providing VGA-resolution video at a frame rate of 30 frames per second. Many newer devices can produce video in multi-megapixel resolutions, and a few can run at high frame rates such as the PlayStation Eye, which can produce 320×240 video at 120 frames per second.”

From: <http://en.wikipedia.org/wiki/Webcam>

DAR: Display Aspect Ratio

The *VazztCaster* software will enable you to set the resolution from among the set of resolutions that the camera you connect to your laptop/computer/netbook supports. *VazztCaster* automatically detects the resolution set that each camera supports and presents them to you for your choice.

Since *VazztCaster* performs a bandwidth test for you on startup, you should consider the available bandwidth detected in the bandwidth test when selecting the resolution from the options presented to you.

Can I do IPTV in High Definition with Vazzt VOTM in the USA?

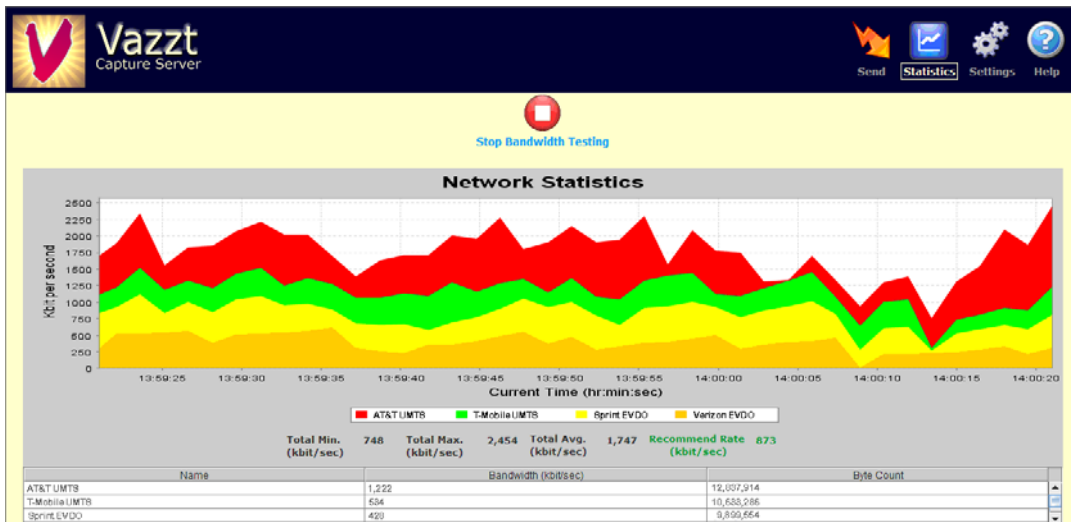
The Vazzt Capture Server can encode High Definition TV (that is, up to and including 1920x1080 at 30 fps). Vazzt can deliver 'files' at speeds well in excess of 20 Mbps on IP wireless networks, if available, and on wired networks of course. [The Vazzt software on large server-class computers has carried live IPTV at 60 Mbps to cinema screens for 3-D viewing with glasses.]

In addition, Carrier wireless data services still limit practical HD IPTV. The Carrier services with nationwide coverage in the USA are EvDO from Sprint and Verizon, and UMTS from AT&T and T-Mobile. Carrier fourth Generation (4G) services, LTE and WiMAX chiefly, are not yet widely available. Clear (also called XOHM or Clearwire) with WiMAX is found in only select cities. WiFi is broadly available but has a range of only 100 to 300 feet and, unlike Carrier EvDO, UMTS, and WiMAX data services, has "no handoff from access point to access point". So WiFi is not useful for true Video-On-The-Move.

Where carrier services are available, you can practically bond 4-7 Carrier data channels together. But with their bandwidth limits the bonded/accelerated super pipe, using 3 3G data services is likely to be in the range of .700-1.000 Mbps in the USA. In the few cities where Clear is available, you can add another 700-900 kbps, which will still limit you to 1.5 to 1.9 Mbps. This is still not adequate for true HD IPTV with 1080p. You will need 4G services and multi-carriers for a bonded pipe adequate for true HD IPTV.

For some field test in Baltimore with Clear's WiMAX, we found downlink speeds (from the Clear network to our laptop) up to 2 Mbps. But uplink speeds, the kind necessary for live streaming coverage, were at most 800 kbps. However, with Clear expanding WiMAX coverage and Carriers' next generation data services (LTE) pending in the last half of 2010 (according to the Carriers), with orders of magnitude increases in bandwidth, HD IPTV will be practical in the near future by bonding 3 or more LTE and WiMAX services. KenCast already has an HD IPTV capable Vazzt VOTM with 1080p video encoding.

In the illustration below, the Vazzt Bandwidth Test for 4 bonded carrier services (AT&T UMTS, T-Mobile UMTS, Sprint EVDO, and Verizon EVDO) is yielding on average 1.747 Mbps Total Average Bandwidth. Because these are shared Telco networks on which available bandwidth is fluctuating constantly, the video encoding recommended by Vazzt VOTM at this location was 873 Kbps.



Can I double my bandwidth by getting 2 identical data services from a single Carrier?

Not generally. Getting 2 identical services will not increase bandwidth from 100% to 200%. First, your identical services are competing for bandwidth on the same cell tower. And Carriers identify your laptop by the MAC address as a single source and your bandwidth may not move up significantly. Bandwidth from a single Carrier most likely will range from 100% to 170% with 2 identical data services. In several random field tests, we found 2 identical EvDO services with Sprint gave us about 135% of the single service bandwidth. We got approximately the same result with a similar test of Verizon's EvDO.

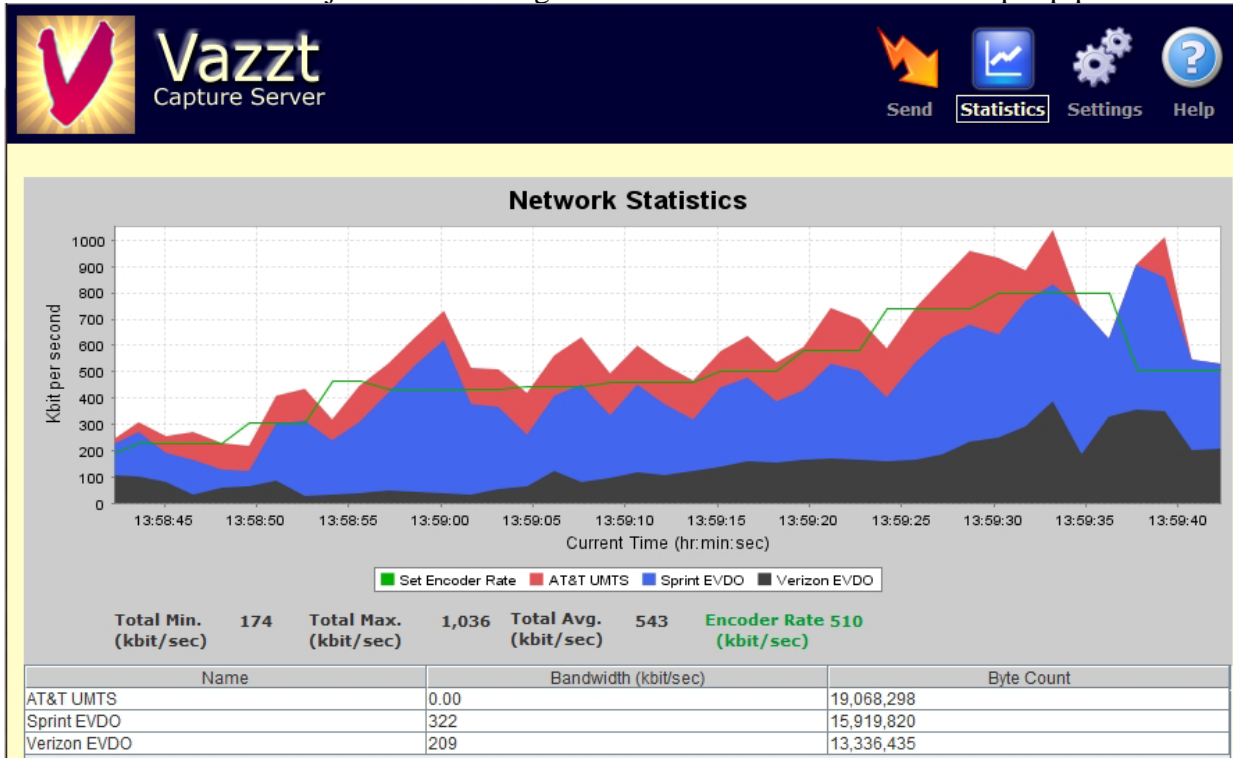
Can Vazzt VOTM be used on Wire lines?

Of course, Vazzt can be used to great advantage on any wire network that carries IP traffic. This includes, for example, the wired Internet, copper and fiber optic networks.

Vazzt can also bond wire networks with wireless networks – try it.

Can I adjust the Bandwidth on-the-fly when bandwidth, even on the super pipe, drops?

Yes, this is done automatically for you, if you select dynamic bit-rate encoding. Vazzt will automatically and continuously monitors the available bandwidth on the super pipe. If total bandwidth falls below the current encoding rate, Vazzt dynamically lowers the video encoding rate to fit within the reduced bandwidth. This reduces resolution, but the video continues smoothly and without breakup. See the changing Encoder Rate (green line) in the illustration below as it adjusts to the change in the overall bandwidth in the super pipe.



How do I power my laptop? And how long can I expect to operate untethered in the field?

Vazzt's video encoding and network functions use laptop power. If the network modems are plugged directly into the USB ports they also draw power. The processing power of the laptop also impacts duration. If using multiple USB cards, consider using a USB Hub with an external battery pack that is rechargeable. A USB card requires up to 500 mA. So for a 4-Port USB hub the battery pack must output of at least 2000 mA, for a 7-port hub at least 3500 mA.

The setup shown below (USB Hub with battery pack and 4 USB cards) of a 15" laptop with a 2.5 GHz processor gives us 2.0 to 2.5 hours of extended operation before the need to recharge. A backup battery pack can be switched into place to double the duration. If the laptop is plugged into a cigarette lighter inside a vehicle or aircraft, the battery pack will remain charged all day.



We have successfully used 4-port and 7-port USB Hubs from several manufacturers (for example, Belkin 4-port USB Hub, model F5U404-BLK and 7-port USB Hub, model F5U237TT). We have also successfully used battery packs from several manufacturers (for example, Universal Lithium Battery Pack PM85-25 with battery capacity of 25 watt hours, battery output of 5 volts, and battery maximum current output of 2000 mA) for operation with 4 USB cards.

Can I use a Video Encoder of my own Choice?

Yes, KenCast will work with those who wish to use a video encoder of their own choice. KenCast built its own video encoder as a separate module from the transport module within its Vazzt Coverage Server software. So it is relatively easy to make a switch to a different video encoder. More than one vendor has already worked with KenCast and enabled their own solution in this way.

What are the key technologies that KenCast uses in Vazzt?

The KenCast video encoder within Vazzt VOTM can encode video up to and including 1080p (1920x1080 pixels at 30 fps). Vazzt monitors available bandwidth and dynamically adjusts the video encoding bit-rate on-the-fly to accommodate fluctuation in bandwidth of the super pipe.

Several key transmission technologies enable Vazzt to:

- **Detect** available bandwidth
 - Upon launch, Vazzt will explore the immediate vicinity and detect any IP network for which the user's computer has been previously configured.
- **Accelerate** delivery on identified networks
 - Uses KenCast's patent pending IP Acceleration methods (bandwidth is pushed up on each network found)
- **Bond** the Detected/Accelerated networks together into a single fat IP super pipe
 - Uses KenCast patent and patent pending technology in network diversity and split/join channeling to achieve bonding
 - Quickly tests the total composite bandwidth of the super pipe sets the default encoding rate based on the test (the user can override the default bandwidth and single-click for a preset profile to ensure a desired, consistent quality, if preferred; or the user can manually configure a custom profile; and IT support at the central hub can remotely access the user's laptop and manually configure an appropriate profile)
- **Load Balance** by shifting outgoing packets from slowing networks to rising networks
 - Vazzt monitors the performance of each of the bonded networks and instructs the function that allocates the packets among the networks on the optimal distribution.
- **Protect with KenCast FEC** (Uses KenCast's renowned patented Fazzt Forward Error Correction algorithms) as employed extensively for the last 15 years by the US Military worldwide and on the battlefield, and by the Entertainment & Media Industry and others.
 - This enables the packets of the encrypted live streams and files that typically arrive over wireless carrier networks out of order and/or badly damaged to be re-ordered/repared on the fly to their flawless state.
 - KenCast patented FEC also allows validation that files that arrived damaged (even badly damage) are identical to the files that left the field location with

near absolute certainty. Vazzt gets feedback from the central hub on file deliveries. This enables retransmission by the Coverage Server of missing content, even after local FEC repair.

- **Secure** the live streams with encryption, and secure files also.
 - This is done using 256-bit AES encryption on the bonded pipe. So live streams and files sent over the pipe are very secure. Keys for deciphering are distributed using SSL type security connection.
 - KenCast has great experience & expertise with encryption and can customize the security solution to the specific needs of an organization
- **Dynamically Adjust Bit-Rate Encoding** of the camera feed.
 - Vazzt is continually monitoring the total available bandwidth of the super pipe it has created. If the overall bandwidth falls below the current encoding rate, Vazzt lowers the encoding rate to live within the new bandwidth level. If the overall bandwidth rises, Vazzt will raise the encoding rate as long as the bandwidth rises or until the originally selected encoding rate is reached. This process results in smoothly upgrading or downgrading video quality to available bandwidth.

Who can use Vazzt VOTM? To which markets is Vazzt of most value?

Vazzt is targeted to:

- Police, Fire, and EMS
- TV Stations
- Newspapers
- Homeland Security
- Entertainment events
- Enterprises of all types
- Military
- Municipalities
- State and Federal Agencies
- University Campus
- Aerial Surveillance
- ENG/SNG Vehicles
- Corporations
- Sports events
- Stringers

Users in an enterprise, who must move about and can add great value to their task with the capture of video in the field and with sharing it with their co-workers, will find Vazzt very valuable. Vazzt can be dynamically reconfigured for varying local IP Network coverage. And such enterprises of necessity cannot always allow their content to pass through a commercial vendor or a public commercial service offering (for example, surveillance video). Because the user need only obtain Vazzt software, and can employ their own laptops, commercial IP network services, and central hub computer equipment on Internet access lines, the only remaining requirement might be additional IP network services. By leveraging the sunk cost of their own resources, Enterprises may find Vazzt a fraction of the price of alternatives.

How Can I Link my Own Website to My Vazzt Producer Website?

Vazzt can embed a link from their own website to their Vazzt Producer website (which is www.vazzt.com/yourvazztwebsite) or send Viewers directly to their Vazzt Producer website.

You, if you can work with HTML (HTML is a computer language used to create websites), or your web administrator can add a link from a page in your own website to your Vazzt Producer website. To link to your Vazzt Producer website from your own website, use the following HTML syntax `Link text`

Since your URL is <http://vazzt.com/yourvazztwebsite>, you need to use the following to setup the link:

```
<a href="http://vazzt.com/yourvazztwebsite">Click HERE!</a>
```

which will display for visitors on the web page at your own website like this:

[Click HERE!](http://vazzt.com/yourvazztwebsite)

The click will take them to vazzt.com/yourvazztwebsite to view your live video. Upon completion of the viewing experience, clicking the back arrow returns them to your web page.

For an additional explanation of linking see:

http://www.w3schools.com/html/html_links.asp

Can I Use Vazzt for a Citizen Journalism

Public Journalism is now open to anyone with a camera and a network connection who finds themselves on the scene of a newsworthy event. The KenCast *VazztCaster* is a program that when installed on a laptop will enable you to quickly get the live video you capture with your camera across the IP networks to major TV News outlets. You can become a Citizen Journalist with a very simple setup with the help of the following TV News agencies who encourage Citizen Journalism:

ABC: [i-Caught](#)

CNN: <http://ireport.cnn.com/>

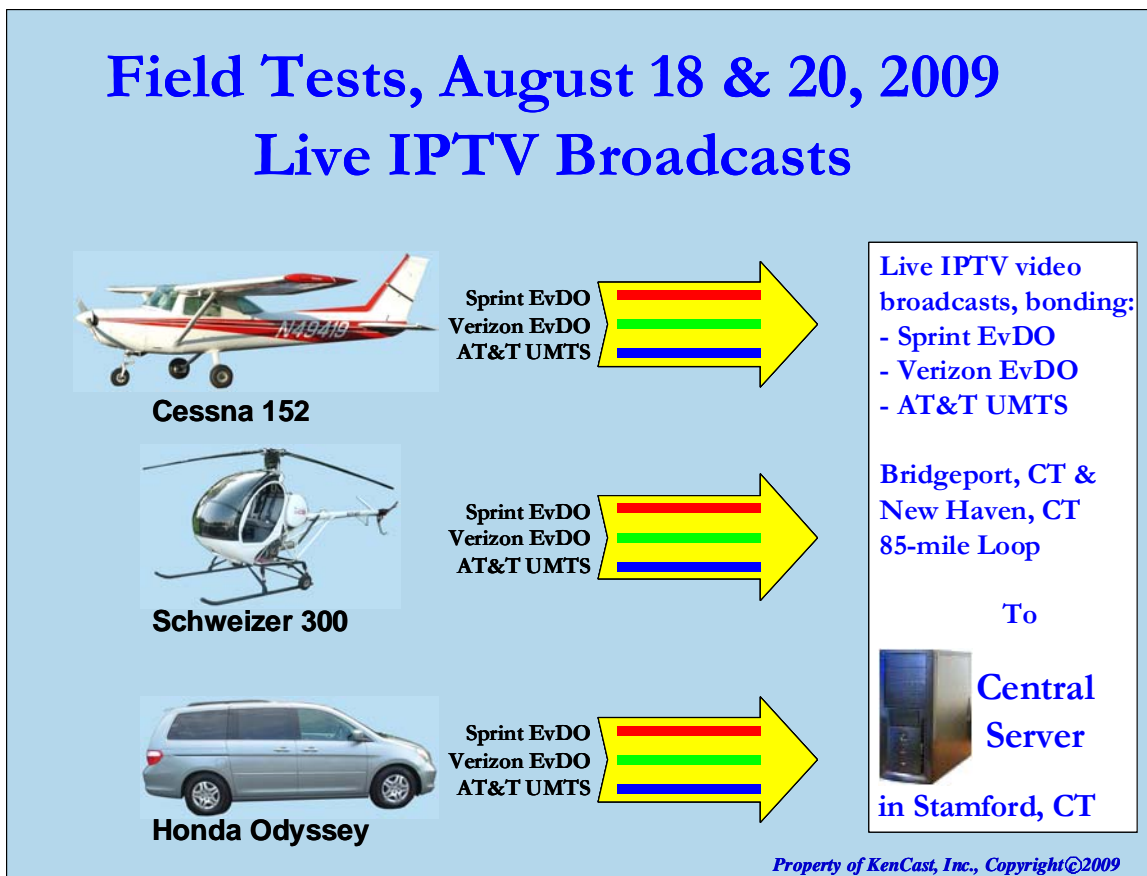
Fox: [uReport](#)

MSNBC: [FirstPerson](#)

Broadcast Interactive: [YouNews](#)

Can I capture live video from a moving vehicle or aircraft?

Yes, Vazzt Coverage Servers can typically capture live video from a moving vehicle or aircraft up to altitude of about 1,800 feet, as well as from users on foot. Above 1,800 feet the horizontal orientation of the 3G & 4G towers does not support capture from aircraft. KenCast successfully conducted a field test in August 2009 to demonstrate this capability in which an 85-mile route was traversed in Connecticut using Vazzt live video capture from a mini-van, a helicopter, and a Cessna.



What are my options for getting Vazzt VOTM and what is the Price?

There are 3 ways to take advantage of Vazzt VOTM to meet your needs.

As a Turnkey System for Video Capture Only

You can buy one or more Vazzt Coverage Servers for \$800 each and a KenCast Enterprise Server for Capture-only for \$4,850. You can then pass through, and/or distribute the content on your own distribution network, and/or simultaneously record/archive it with the KenCast Enterprise Server.

As a Turnkey System with both Video Capture and wide Delivery

You can buy one or more Vazzt Coverage Servers for \$800 each and a KenCast Enterprise Server with both Capture and Distribution capability for \$31,500. This is the full version of our traditional Enterprise Server that is used for broad video distribution in mission critical applications for major enterprises and military entities worldwide. You must secure bandwidth on a suitable IP network for distribution, typically the Internet/satellite/fiber networks.

As a Service for Video Capture and wide Delivery

You can download the Vazzt Coverage Server at no cost.

KenCast provides you an ID and Password and your own Vazzt Producer website.

You must provide the cameras and laptops, as well as your own network services to get the content to the KenCast Central Hub.

You then can begin to transmit content to the KenCast Central Hub, where it will be made available on your web site for your viewers to see on their computers with a Flash Player, on iPhones and other devices. You must pay KenCast for the content that is sent from your web site to your viewers. Contact us to get pricing.

How does KenCast's Vazzt VOTM work as a Service?

In addition to providing a complete end-to-end VOTM system as a turnkey application, KenCast offers you Vazzt VOTM as a Service. If you only wish to download the Vazzt Coverage Server and use it with your camera and laptop to capture video, KenCast offers a Service to receive your IPTV content and help you distribute it. KenCast maintains a Central Hub to which we can provide you a location to send your captured content. We can then make that available to you and your viewers in a number of ways.

You can download the Vazzt Coverage Server, install it on your laptop, and send your IPTV to a KenCast maintained Central Hub. The Vazzt Enterprise Server at the Central Hub can feed your streams directly into a Flash Media Server. It is then viewable over the Internet by those accessing your Web site provided to you by KenCast, if they have a Flash Player on their desktop or laptop. They can also view it on some smartphones (for example, the Vazzt captured IPTV can be viewed through your Web site as above with the iPhone).

What experience does KenCast have in moving Video?

KenCast, Inc., moves as much live video and video files daily as any company in the world. Over the last 15 years KenCast has provided content distribution infrastructure in over 2,000 applications, chiefly video files and IPTV streams, including live IPTV to big cinema screens in 3D.

The majority of these applications are mission critical for major entities in Entertainment & Media, Homeland Security, and Military. Following is a representative list of our Customers and Markets.

KenCast, Inc.



Representative Clients & Verticals

For Content Delivery

<p><u>ENTERTAINMENT</u></p> <p>ESPN Hollywood Studios Kodak/IBM Dolby Liberty Media Discovery Channel TVN Entertainment Viacom's CTN Media DVX</p>	<p><u>CABLE & LODGING</u></p> <p>Comcast Time Warner Charter Commun' Rogers Cox Cabletime National Cinemedia LodgeNet On Command Starz Encore</p>	<p><u>MEDIA</u></p> <p>CBS News NBC News FOX News Cihan News Kyoto News ABC Radio Associated Press Canadian Press BBC</p>	<p><u>PUBLIC SAFETY/DHS</u></p> <p>Dept of Homeland Security FEMA GUARD/WNET New York Maryland Public TV Wisconsin Public TV St. Louis Public TV Jackson MI Public TV WETA Public TV Wash' DC KERA Public TV Dallas</p>
<p><u>MILITARY</u></p> <p>DISA/GBS (Joint Forces) DHS/NGA AFRTS (Navy) AFWA (Air Force) NOAA (Weather) SPAWAR (Navy) Raytheon EDS</p>	<p><u>RETAIL & BANKING</u></p> <p>CVS-Lawson Target Stores May Dept Stores Advance Auto Parts Shoppers Drug Mart Bank of America Hypo Vereinsbank Citizens Bank</p>	<p><u>DIST' LEARNING</u></p> <p>Trinity Workplace AFWA (Air Force) GATE (U.S. Gov') Univ of Nebraska Univ of Wisconsin Penn State Exam Room Ntwk Europ' Med' Netwk</p>	<p><u>SERVICE OPERATORS</u></p> <p>Intelsat/PanAmSat Ascent Media MicroSpace Convergent Media Orbicom ClearWire Spacenet (SES Astra) Loral Skynet</p>

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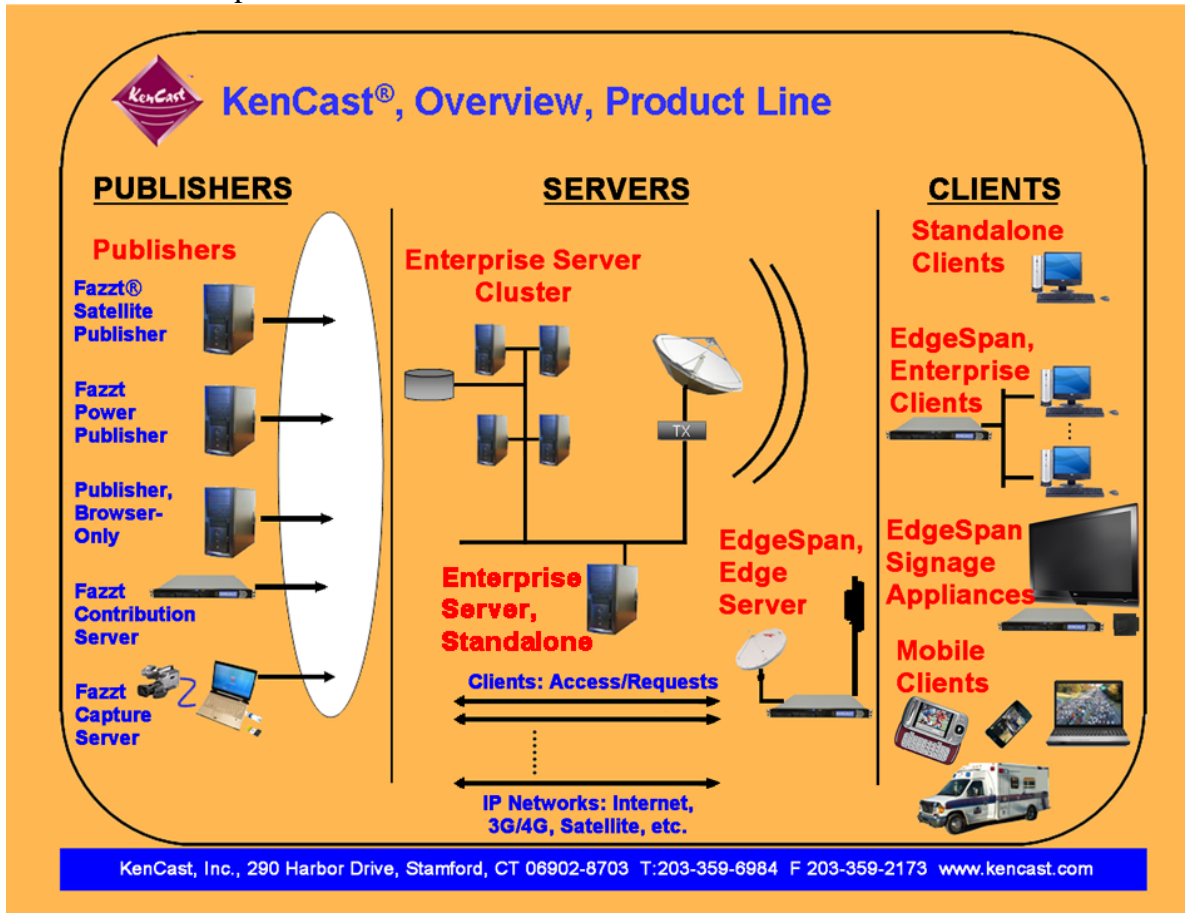
How does KenCast help me distribute my video on my own network?

KenCast products deliver huge amounts of IPTV and video files every day for Hollywood, cable companies, TV networks, lodging/hotels, the military forces of the USA and its allies, retail stores, banking and financial institutions, universities, and major carrier service operators. We can do the same for you.

For entities that need help in distributing video captured at their central hub with KenCast's Vazzt VOTM, we would be happy to introduce you to our world-class Content Delivery products for multicast and unicast to a few sites or hundreds of thousands of sites.

KenCast Fazzt products have traditionally been used to deliver IPTV streams, even very large streams, and video files. For example, Fazzt has been and, continues to be, used to deliver IPTV in 3-D (at bandwidth from 20 Mbps to 60 Mbps) and movie files (300-400 Gbytes per movie file) to cinema screens. Vazzt integrates well with commercial Flash Media servers for broad distribution.

Our full product line is available on at least Windows and Linux platforms. Many of the products are also available for additional Operating Systems. Following is a simplified illustration of our product line.

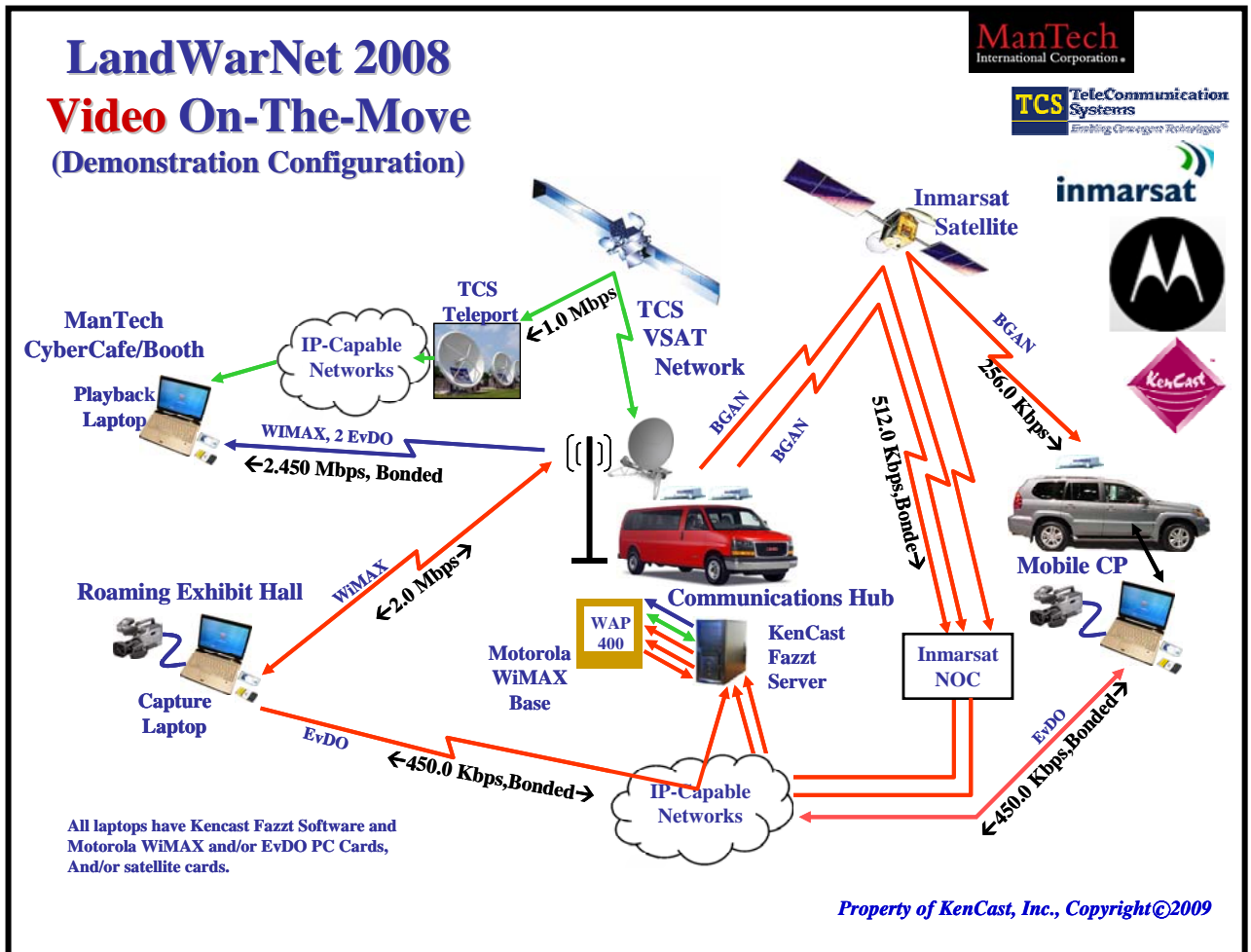


Does KenCast also support broadband bonding on commercial wired, satellite, and private fiber optic networks?

Yes. KenCast’s Fazzt product line has been carrying content from Publishers to Servers to Clients using split/join channels (broadband bonding) over wired networks and satellites for a number of years now for entities in Entertainment & Media and the Military.

For example, cinema-size files (300-400 Gbyte files) are distributed using 2 satellites (DVB-S2) and a terrestrial fiber network at 216 Mbps on a virtual channel (split/join or bonded channel).

The bonding of IP Networks by the Fazzt broadband product line has now been ported to the Broadband Mobile market, starting with the military. For example, this capability was demonstrated to the US Military at the LandWarNet Show in August 2008 by KenCast in cooperation with ManTech, TCS, Inmarsat, and Motorola.



Why the name Vazzt VOTM?

One of the keys to successful video capture over IP networks is to find enough bandwidth at a moments notice and keep it while on the move. KenCast’s solution does it well and in fact typically finds a VAST (Vazzt) amount of bandwidth for you. And KenCast’s solution is targeted to video capture by those on location, especially on the move in vehicles, aircraft or on foot. So we dubbed it Vazzt Video-On-The-Move (VOTM).

Can I get Technical Support for Vazzt VOTM?

The Vazzt VOTM application software comes with a User’s Guide to Operation, a ReadMe file and online help materials. KenCast also offers Annual Maintenance & Support for a fee of 15% of the current cost of software. This includes telephone technical support, all minor upgrades and new major releases.
support@kencast.com

Can I order online and pay with a Credit Card?

Yes. Visit <http://www.kencast.com/votm>

How can I contact KenCast?

sales@kencast.com

Or

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290 Harbor Drive

Stamford, CT 06902-8703

203-359-2173 fax

