



Collapse. Stream. Grow.

How to thrive from the transition to OTT

August 20, 2020

Panelists

- *Matt Cuson*
VP Marketing and Product, Minerva
- *Hayne Baker*
Broadband Technology Solutions Manager, TVC
- *Tim Potter*
Sales Engineer, Minerva
- *Randy Osborne*
SVP WW Sales, Minerva

Minerva Highlights



Headquartered in Silicon Valley, we have development centers in California, Italy and Bulgaria (185 employees)

Over the past **20 years**, with our pioneering work in IPTV, we have **built the foundations** for the next-generation of television

Deployed with more than **300 operators worldwide** serving **5M+ subscribers** in **53 countries**

Our recent **acquisition of TOK.tv**, with its leading artificial intelligence and communication technologies, uniquely positions us to shape the future of television

Originally funded by the most prominent Silicon Valley Venture Capitalists, Minerva has been **operating profitably for the past 15 years**

Our Mission



To power **the best place** for people
to **discover and experience** the best content,
on their own or **together with the people they love**

What to watch with so many choices and so little time?

Technology is giving us more flexibility, but it is also pulling us apart.



A full-page photograph of a person in a red shirt and black pants climbing a large, overhanging rock face. The climber is positioned on the right side of the frame, reaching up to grip the rock. The rock face is a massive, light-brown overhang that dominates the left and center of the image. Below the rock, a dense green forest covers a valley, with a winding river visible in the distance. The sky is visible in the upper right corner.

Operators *face tricky challenges*

...with little room for error.

3 Opportunities



1

Collapse the headend

- *Feed legacy cable*
- *Support STBs*
- *90 days*
- *Zero headend overlap*

2

Stream

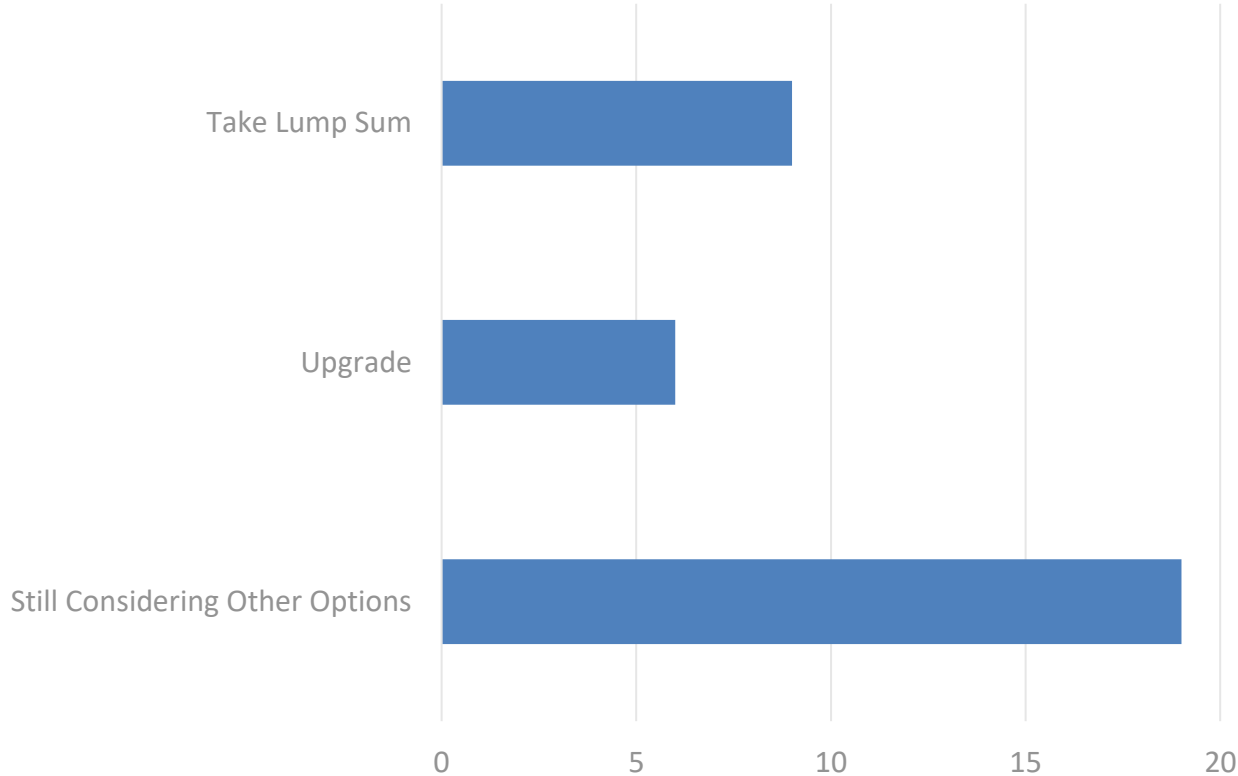
- *Mobile*
- *Smart TVs*
- *Android TV*
- *Apple TV*
- *Fire TV*
- *Roku*
- *Ready on Day 1*

3

Grow. Thrive.

- *Engage*
- *Personalize*
- *Promote*
- *Upsell*
- *Cross-sell*

Poll 1 Results: *Based on what you know today, which FCC option are you likely going to make?*



Powering *the best place for the best content*



Content Merchandising

With our Presentation Management Framework operators can dynamically organize and promote their content



Intelligent Delivery

Our powerful Resource Management Tools allow operators to deliver the best video experience to all subscribers



Assisted Discovery

By combining Recommendations and Smart Filters users can quickly find relevant content



Watch Together

With our embedded Social Platform, subscribers can experience live events together with the people they love



Smart Recordings

Personalized Highlights enable viewers to enjoy their favorite programs, no matter how much time they have



Once Upon a Time in... Hollywood (2019)

A faded television actor and his stunt double strive to achieve fame and success in the film industry during the final years of Hollywood's Golden Age in 1969 Los Angeles.



All VOD

AMY POEHLER
JAMES VANDERBEEK
WE'RE THE MILLERS



ADAMS SANDLER
DREW BARRYMORE
50 FIRST DATES





DE BEERS
THE HOME OF DIAMONDS SINCE 1888



DISCOVER

On Demand



Recordings





Networks

your

ABC



The Bachelor (2019)

Reality



Whiskey Cavalier (2019)

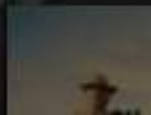
Drama



The Good

Drama

AMC



Control *the best place for the best content*



MINERVA ITVBackOffice

Service & Pricing +

IP Headend +

System Setup +

Report +

UI Configuration -

Stripes

Pages

Nav Items

Nav Panel

Messaging +

Create Stripe

ID

200

24

23

22

21

20

19

18

17

Edit Stripe Style Devices

Parameter	STB	Stationary	Phone	Tablet
Orientation	Landscape	Landscape	Portrait	Landscape
Poster Scaling	Large	Medium	Medium	Medium
Stripe Title	On	On	On	On
Row Header	Off	Off	Off	Off
Show All	Conditional	Conditional	Conditional	Conditional
Max Items	18	18	18	18
Items To Scroll	1	1		
Content Info	On Selected	On Selected	All Off	All Off
Show Expanded Metadata	Off	Off	Not Available	Off

Full EPG for Live, Catchup and Restart TV



Live TV				
your				
Today	9:30 AM	10:00 AM	10:30 AM	11:00 AM
1 abc HD	Jimmy Kimmel Live!		Nightline	ABC7 News 11:00
2 CBS	The Late Show With Stephen Colbert S04 E177 · Norah O'Donnell; Topher Grace		The Late Late Show With James Corden S04 E111 · Lisa Kudrow; Will Forte; Jason Sudeikis; Sarah	
			Talk, Interview Norah O'Donnell ("CBS Evening News"); and Topher Grace.	
			15 min. left 1 h 2 min.	
3 FOX 2	Modern Family	Modern Family	Seinfeld	Seinfeld
4 KRON 4	The Good Wife	The Good Wife	Inside Edition	

12



EL TRECE
Special Delivery

02



TELEFE
The Dark Knight

32



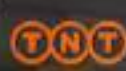
TN
Restricted

18

TyC Sports

TYC SPORTS
The Young and the

48



TNT
Special Delivery

4

Bloomberg
TELEVISION

Bloomberg TV
Bloomberg Survei...

2



CNET
Special Delivery

1



CHEDDAR TV
Special Delivery

Wall Street Beat

Bloomberg Surveillance

News · Business

Bloomberg
TELEVISION

04



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Powering *the best place for the best content*



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Watch Together

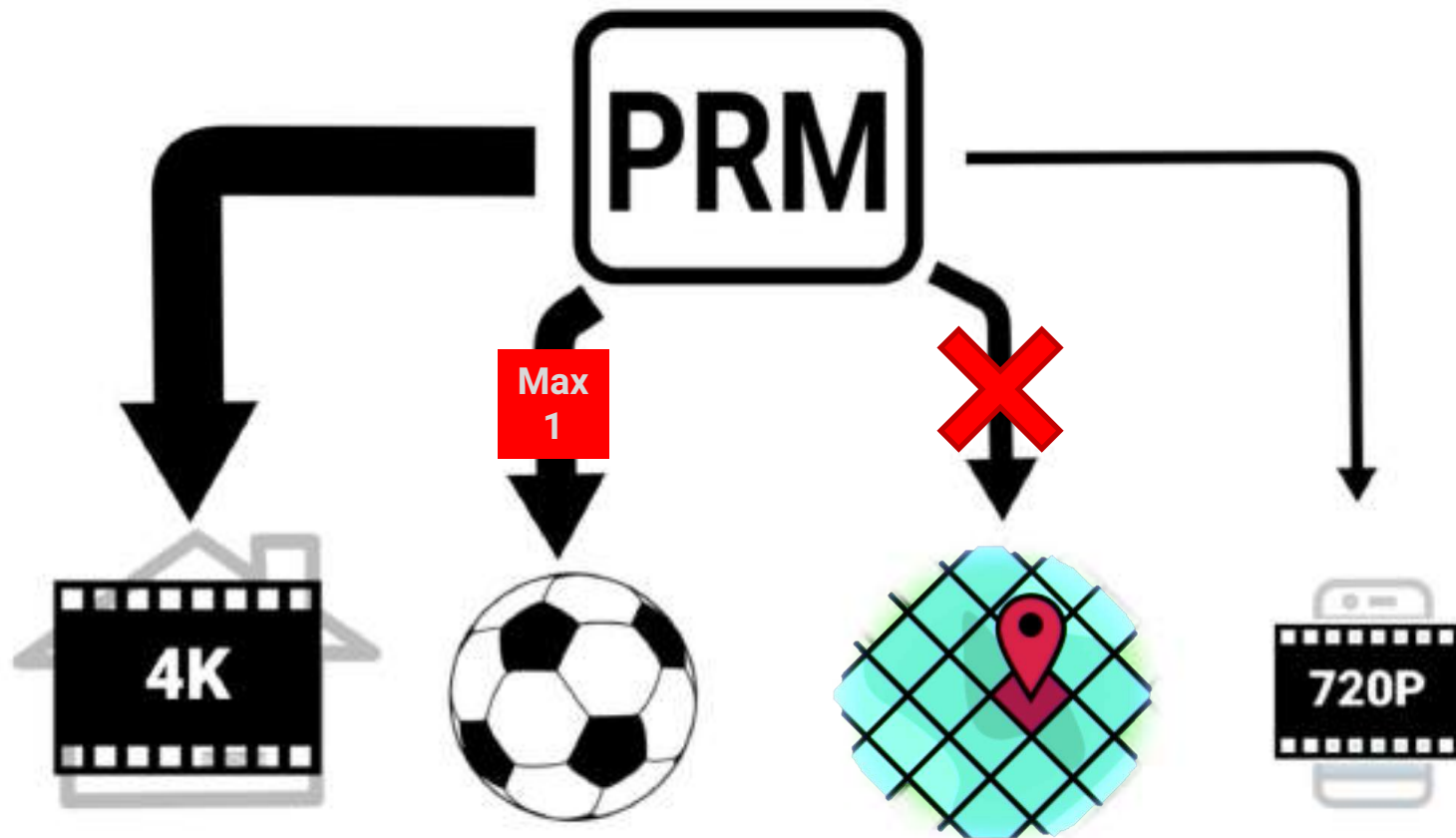
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Smart Recordings

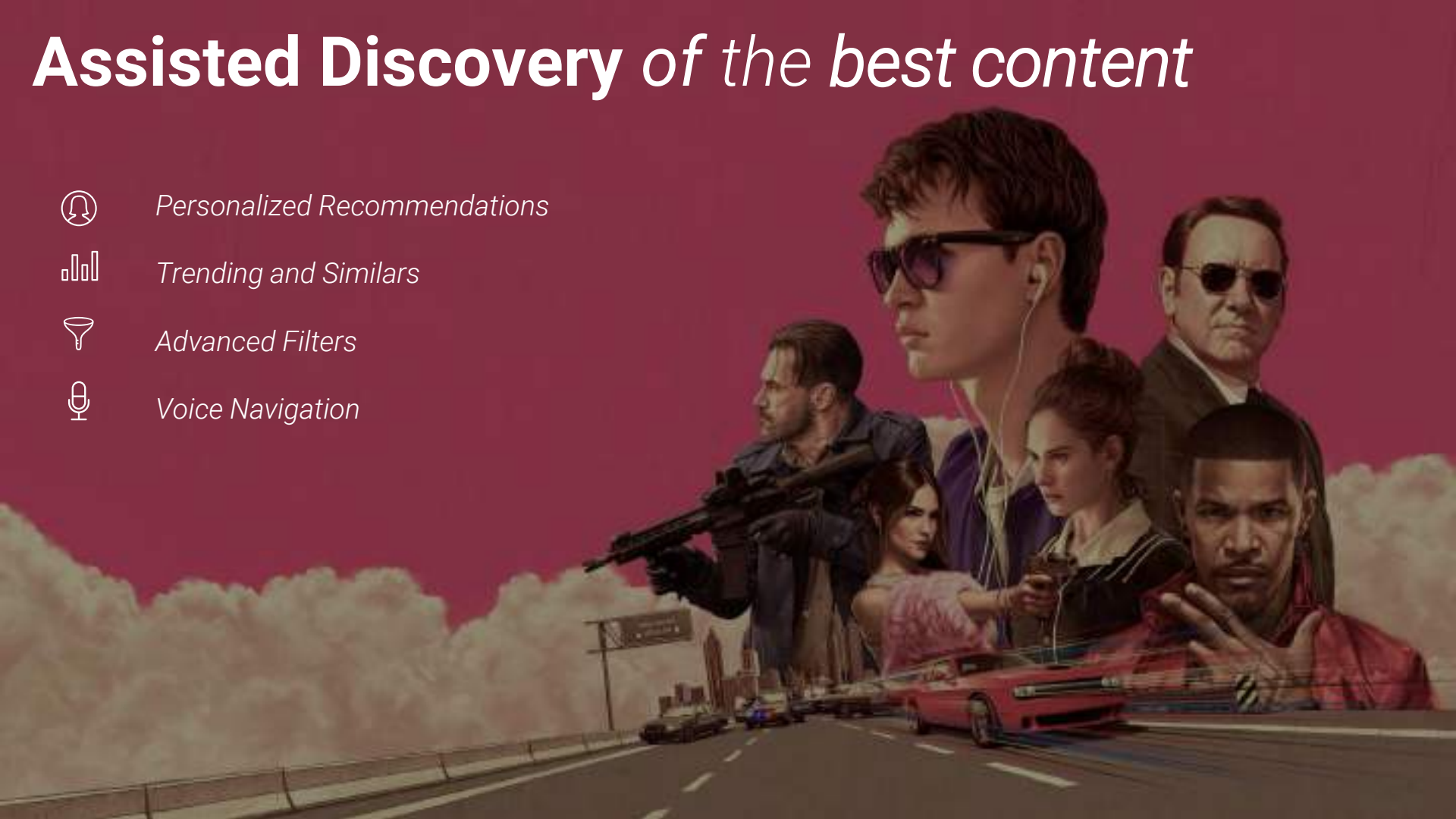
Personalized Highlights enable viewers to enjoy their favorite programs, no matter how much time they have

Intelligent Delivery *for the Best Video Experience*



Assisted Discovery of the *best* content

- Personalized Recommendations
- Trending and Similars
- Advanced Filters
- Voice Navigation



Watch Your Favorite Shows Together



Share the excitement *without leaving the app*

Talk/Text or message *in real time*

React *with customized* sound effects

Capture memories *with shared selfies*



Enjoy Recordings *Your Way*



Smart Highlights:

- *By time*
- *By player*
- *By play*

Powering *the best place for the best content*



Content Merchandising



Intelligent Delivery



Assisted Discovery



Watch Together



Smart Recordings



Minerva YourTV Now

Turns your journey from this...



...to this!

CNI Overview



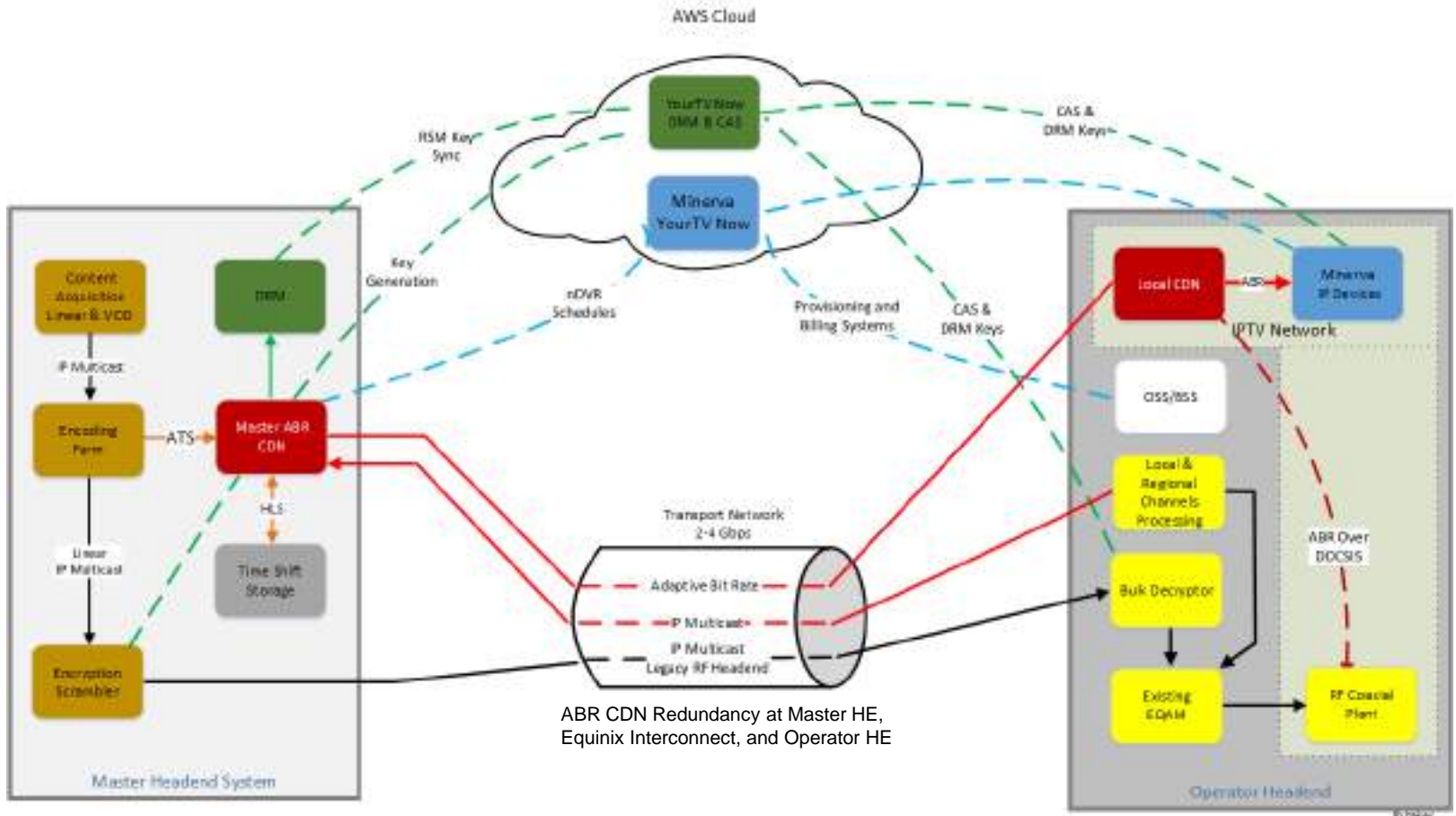
- *Established in 1993*
- *Allows local service providers to deliver high quality services*
- *Knowledgeable experts and a 24/7/365 Live answer NOC & Call Center*
- *CALEA Trusted Third Party*
- *NOC IPTV Multicast Video and ABR Video for HLS and DASH*
- *Intelligent Network Monitoring & Notification*
- *30+ operators using video operations*



- *Operated IPTV headend since 2005*
- *Presently have 200 National Video Channels and 50 Music*
- *All content is in HD format if provided by Programmer*
- *100G core transport to CNI core*
- *Standby generator supported operation*
- *Secure location on our redundant ring*
- *Currently upgrading IRDs for spectrum migration*
- *Dishes are already prepared for migration*



Collapsing the Headend: Hosted Service Diagram



Benefits of Transition



- *Cost savings on operations, maintenance, power and heat load*
- *Trust in a "HaaS" provider with over 15 years of experience*
- *Transcoding options for Local and Regional Sports Acquisition*
- *Codec agnostic QAM delivery to legacy set-top boxes*
- *Elimination of recurring fees and support on legacy CAS*
- *Flexibility to meet the competitive demands and unique requirements*

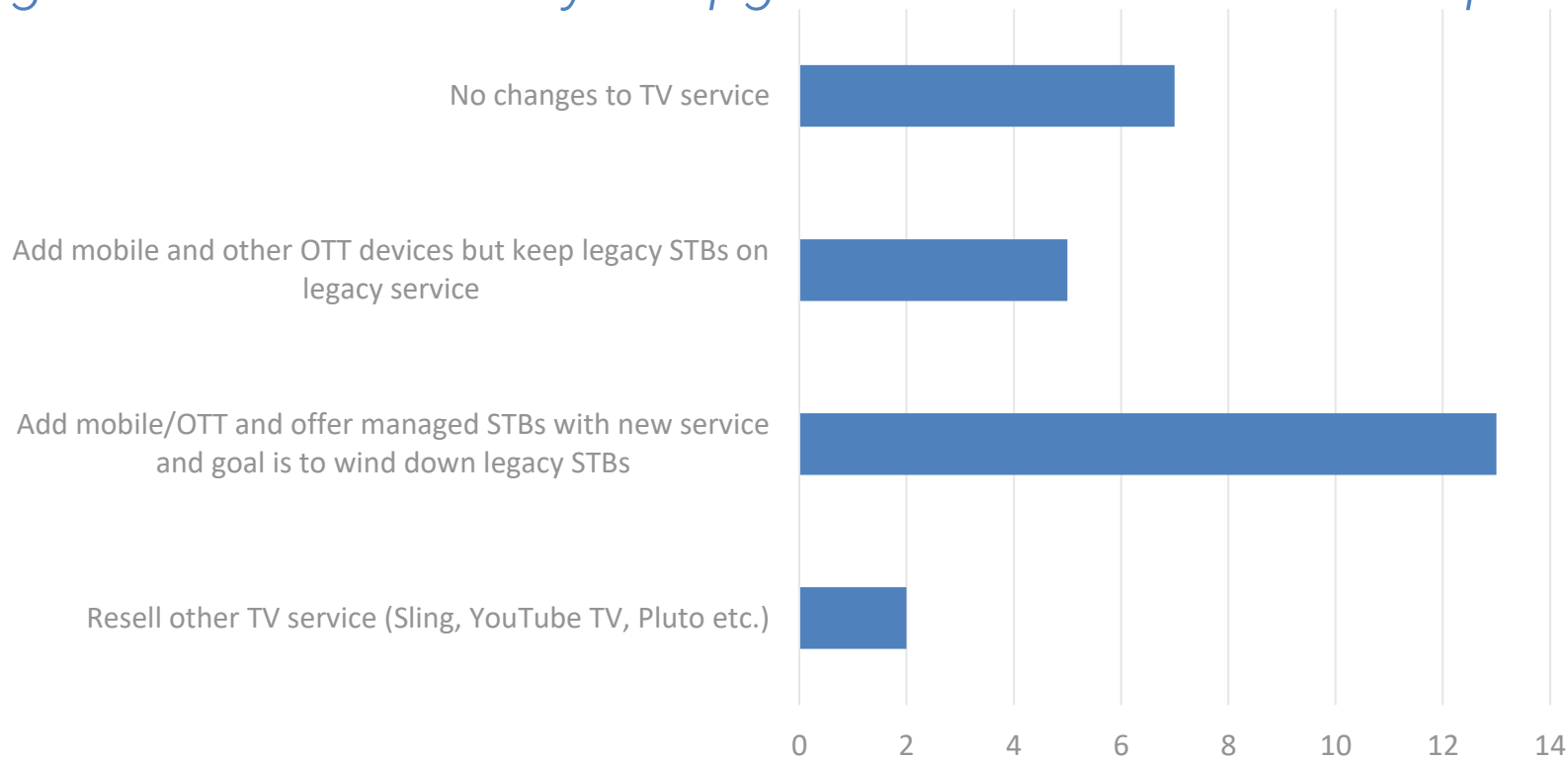
Collapsing the Headend: FAQ



- *What equipment is required at my headend?*
 - *Local and Regional Sports acquisition equipment as desired, EAS, legacy RF Equipment and managed CDN local cache(s).*
- *What size circuit would be required from my headend to CNI headend?*
 - *2-4Gbps of data throughput is the average requirement.*
- *Where is CNI's interconnect for a private circuit?*
 - *Main POP Equinix in Chicago.*
- *Do you recommend a provider for the private circuit?*
 - *We can provide referrals if desired.*

- *How do you handle redundancy?*
 - *Redundancy is built into the service delivery, circuit redundancy can be included as well.*
- *How long does it take to complete the transition?*
 - *Projects can be completed in 3 months, circuit setup times can vary.*
- *Do my subscribers lose any services with the hosted solution?*
 - *Generally with the services offered subscribers will gain services not lose them.*
- *Can I keep my existing subscribers legacy QAM Set-top Boxes running?*
 - *Yes, existing distribution is supported, and additional headend equipment will be reduced.*

Poll 2 Results: *Which option best describes how you see the future of your TV service over next 12 months? (regardless of whether you upgrade headend or take lump sum)*



Minerva Solution Fees



HEADEND SET UP FEES	
BULK ENCRYPTOR/DECRYPTOR	\$ 10,000
CDN EDGE NODE	\$ 40,000
HEADEND MONTHLY FEES PER SUBSCRIBER	
NATIONAL MULTICAST FEEDS	\$ 1.50
NATIONAL ABR FEEDS	\$ 1.00
START-OVER TV, CATCH-UP TV AND CLOUD DVR	\$ 1.00
SVOD SERVICES	\$ 0.50
PLATFORM SET UP FEES	OPTION
PLATFORM INTEGRATION, APPLICATIONS BRANDING AND TRAINING	\$ 25,000-\$50,000
PLATFORM MONTHLY FEES PER SUBSCRIBER	
MINERVA PLATFORM, VERIMATRIX DRM, CONTENTWISE RECOMMENDATIONS AND ROVI METADATA	\$ 2.00
ROVI IPR	\$ 1.00

NOTES:

1. Service provider is responsible for 4 Gigabit dedicated link to Equinix Chicago
2. Platform set-up fee includes OSS/BSS and EAS integration, application branding and store submission services
3. Supported devices include Linux and Android TV STB's, Fire TV, Apple TV, Roku, Chromecast, iOS and Android Tablets and Mobile Phones

Special Offer



Deliver unique services to your video subscribers

Sign-up for Minerva YourTV Now Cloud Service before September 30th, 2020 and enjoy:

- Watch Together and Smart Highlights free of charge for 12 months





Powering the best place for the best content

Contact us at sales@minervanetworks.com