



# Azure Media Services

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# Agenda



- Challenges for providing good video experience
- What is Azure media services, and how does it help

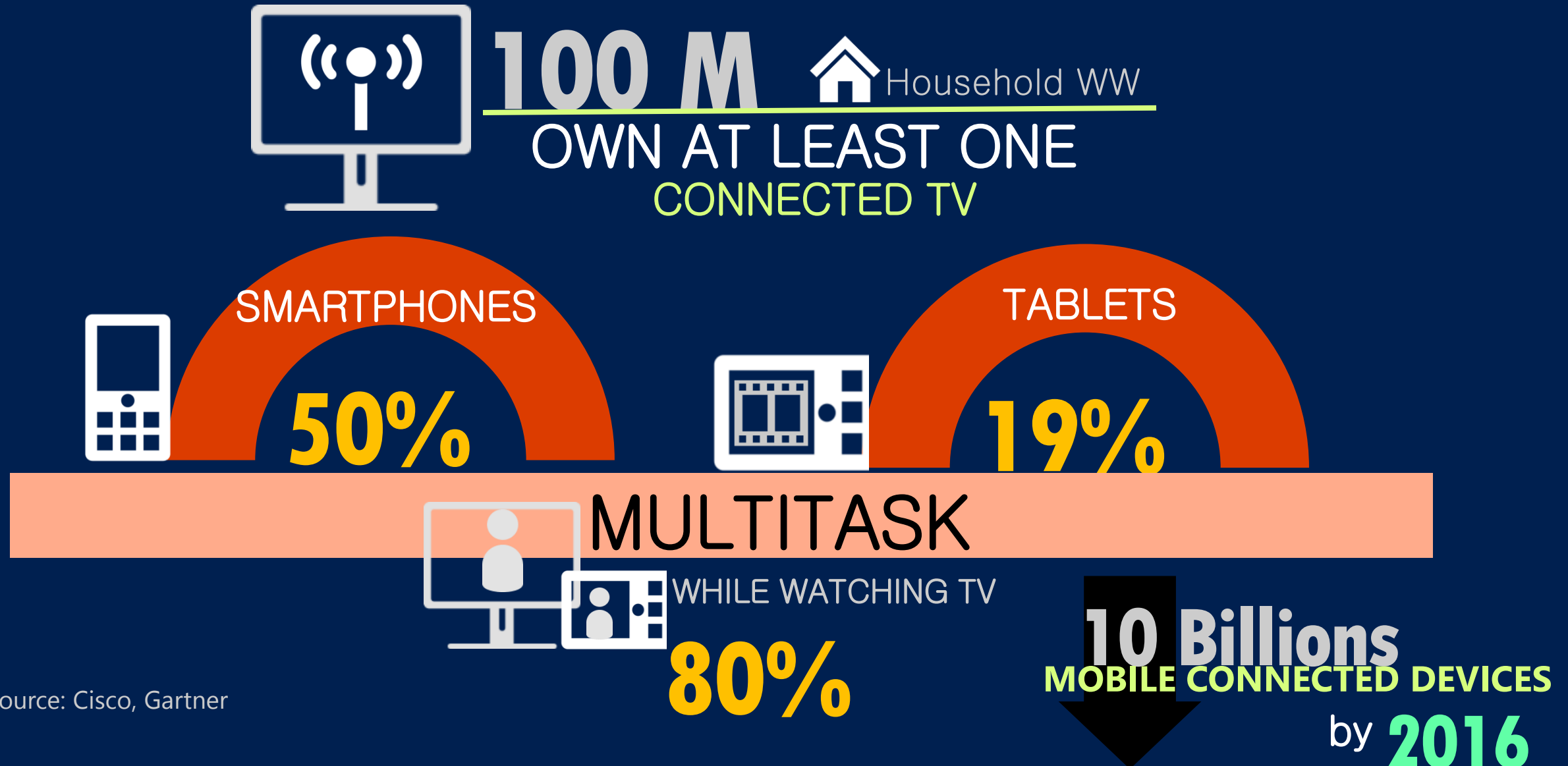


- Key terms
- Examples
- Demos
  - Portal
  - SDK
  - Orchard
  - Live Streaming (?)



Landscape

# What changed for Media Industry?



\*Source: Cisco, Gartner

# Fragmentation



VIDEO



WEB



99%  
on DESKTOPS  
and LAPTOPS



MOBILE  
BROWSER



NO PLUGIN

PROGRESSIVE DOWNLOAD

**ADAPTIVE STREAMING**



*There is an app for it*

**APPLICATIONS**

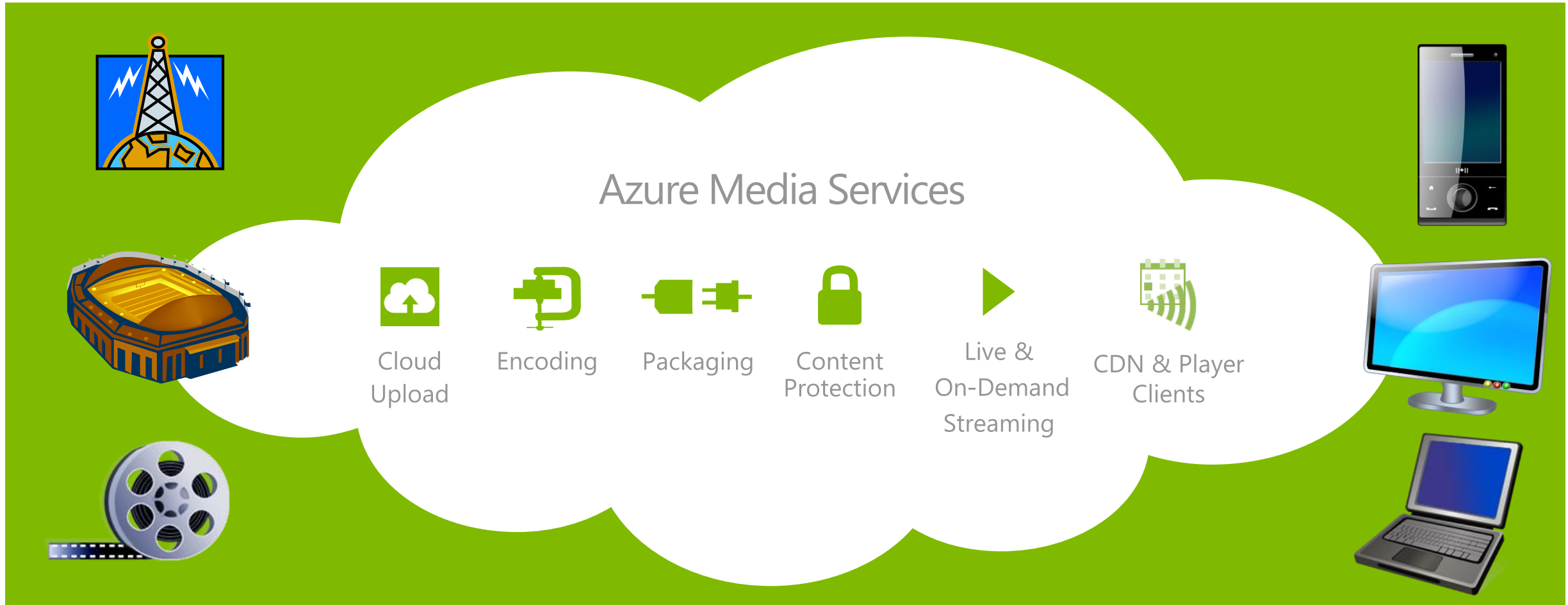


Azure Media Services



# What Do We Mean by Media Services?

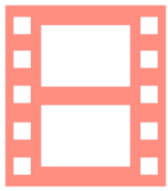
Scalable Components for Building Custom Media Workflows in the Cloud



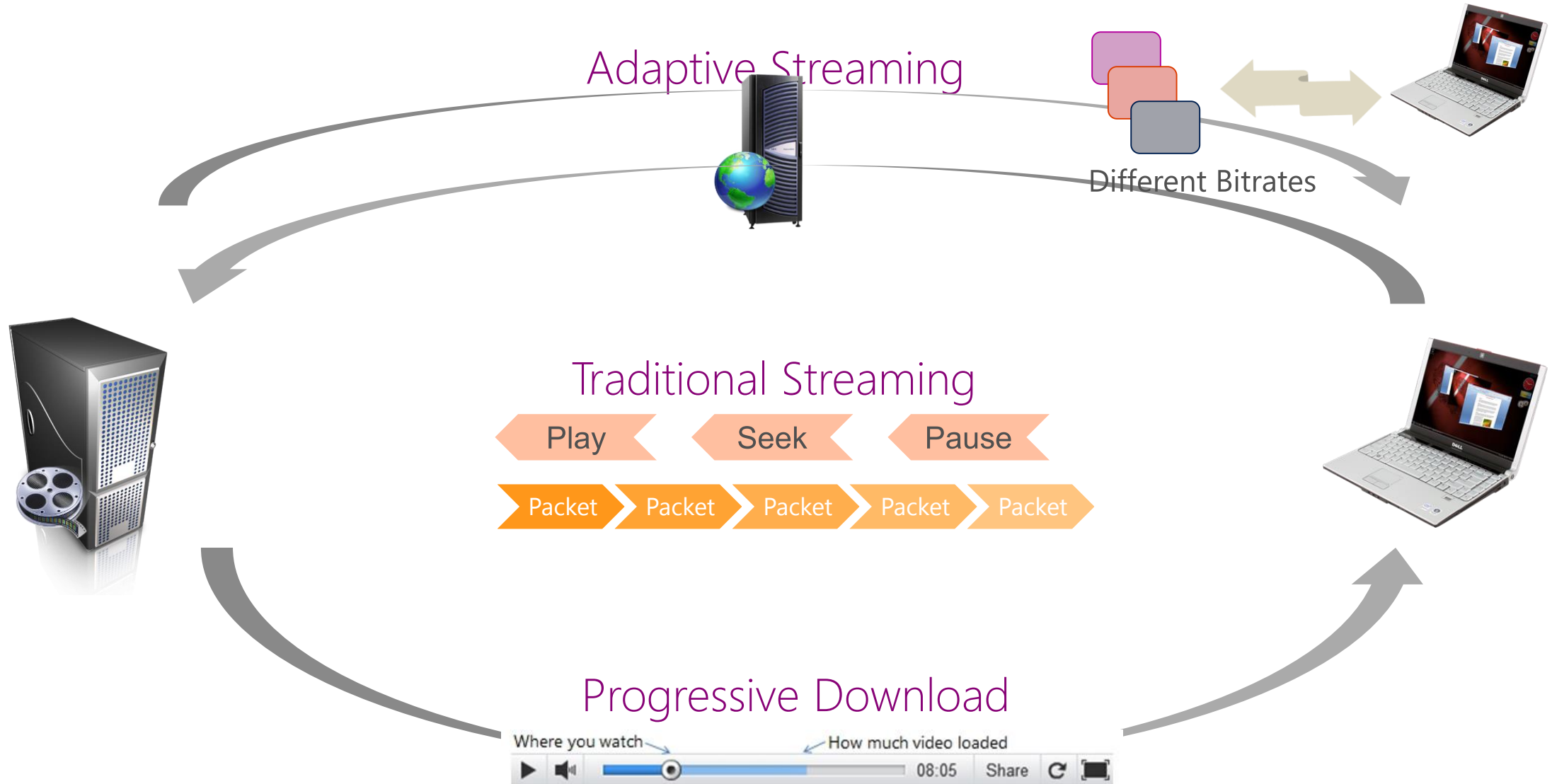


# Key Terms

Term	Definition
Mezzanine File	Compressed files to mitigate the need for hard disk-drive space for large files.
Media Workflow	Key processes that make up media production (e.g. ingest, encoding, etc.).
APIs	Application Programming Interfaces (enable you to build applications using a technology platform).
Encoding & Transcoding	First format conversion is generally considered encoding with subsequent conversions transcoding.
BLOB	Binary Large Object are binary files such as images, videos, etc.
Shared Access Signatures	Provide a way to enforce security against a BLOB file in Azure storage.
CDN	Content Delivery Network provides regional ways to deliver content in a cached/performant way.
Smooth Streaming	Media that is presented to user and delivered by a provider.
Adaptive Bit-Rate Streaming	Streaming that adapts to the users bandwidth/CPU resources and adjusts file streaming accordingly.
SD/HD	Refers to level of resolution (or picture quality), or Standard (e.g. 480p) vs. High Definition (e.g. 720/1080).
DASH	Dynamic Adaptive Streaming over HTTP (or MPEG-DASH) is media streaming from traditional HTTP servers.
Origin Server	Holds all of the information about the live stream and can scale to stream the media to users.
Ingest Server	Mainly accept encoder streams and then fan them out to origin servers.
Transmuxing	Conversion of format to server clients such as mobile devices.



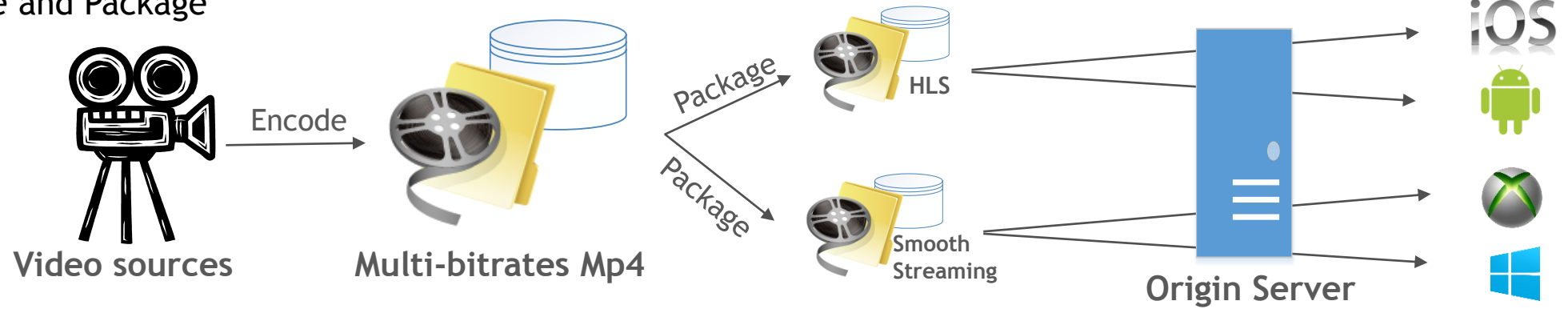
# Content Delivery



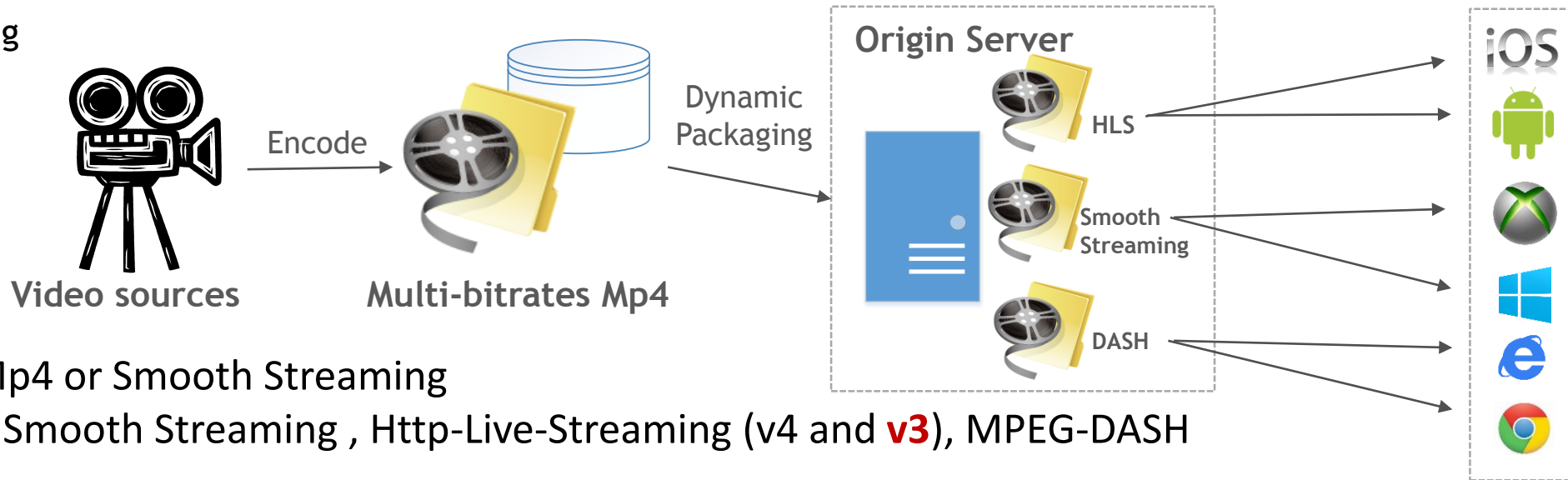
# Feature highlight- Dynamic packaging

Allows you to re-use your encoded content and bring it to various streaming formats without repackaging the content.

## Traditional Encode and Package



## Dynamic Packaging



Input format: Mp4 or Smooth Streaming

Output format: Smooth Streaming , Http-Live-Streaming (v4 and **v3**), MPEG-DASH



A collage of various images including playing cards, a laptop, a soccer ball, a heart, and other objects, with a hand reaching towards them. The word "Examples" is written in white at the bottom left.

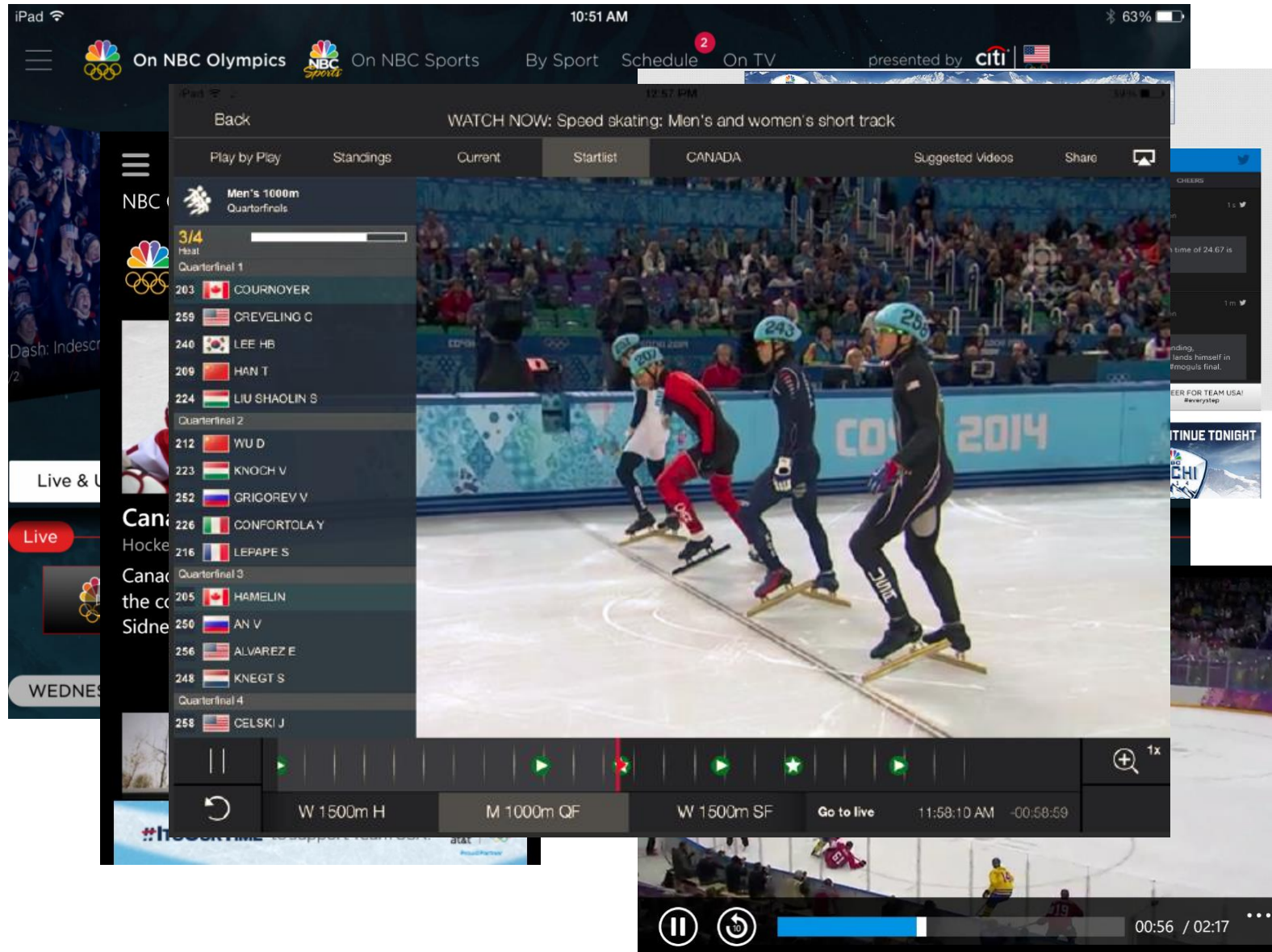


**sochi.ру**  
**2014**





# Sochi by the numbers



- 18 days of events
- 10,000 hours of HD streaming, Triple the Vancouver games
- 99.999% uptime
- 204 live streaming channels
- 100 TB of storage, 35 PB streamed
- 500 billion storage transactions
- 5 broadcasters in 22 countries
- NBC, CBC, América Móvil, ViaSat, and others
- Partners: iStreamPlanet, Deltatre, Adobe, Akamai
- Achieved a Streaming event record 2.1 million viewers of the US vs. Canada semifinal hockey game



[HOME](#)[AMA PRO](#)[IMSA](#)[NASCAR](#)[WATCH LIVE](#)[WELCOME](#)

2014 DAYTONA  
200  
ROAD RACING  
RECAP



AMA PRO  
FLAT TRACK



LIVING A DREAM;  
DANIEL SUAREZ

## LATEST NEWS

**FORD ECOBOOST  
STANDS UP TO  
PUNISHMENT**

**WHELEN MOD TOUR  
NEWS & NOTES:  
THOMPSON**

## SOCIAL

 **NASCAR Stats** @NASCARStats 14m 

2010 - @KyleBusch, @MonsterMile/  
@KurtBusch, @CLTMotorSpdwy RT  
@SRASC: @NASCARStats when  
was last time brothers won  
consecutive NASCAR races?

↻ Retweeted by NASCAR

Expand   

# Other customer examples

- Everybody is a broadcaster (pay per use, not millions upfront)
- Enterprise YouTube
  - HR
  - Training
  - Etc.
- CCTV
- Restaurants, amusement parks
- In- and outdoor (extreme) sport clubs
  - I.e. Carting, parachute or bungee center

# Demos!



# Used links

- Dash.js (<http://msopentech.com/opentech-projects/broadband-video/>)
- MS OpenTech (<http://msopentech.com/opentech-projects/orchard-azure-media-services/>)
- C# VOD Sample  
(<http://code.msdn.microsoft.com/windowsazure/Windows-Azure-Media-040435f8>)