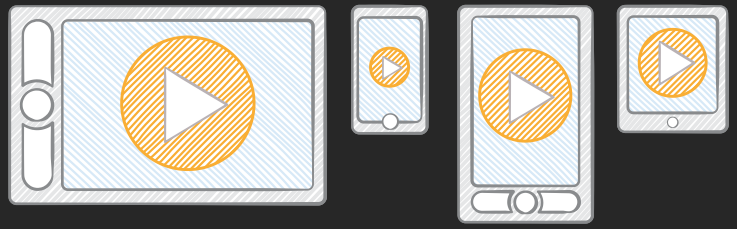

Digital Media
in the AWS Cloud

The Evolution of Media Workflows

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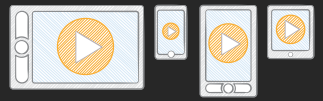
Agenda

- AWS Overview
- Media in the Cloud
  - How Is the Cloud Being Leveraged Today?
  - Trends and Where We Are Headed
  - What's Next?
- Summary and Key Points



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How did Amazon…

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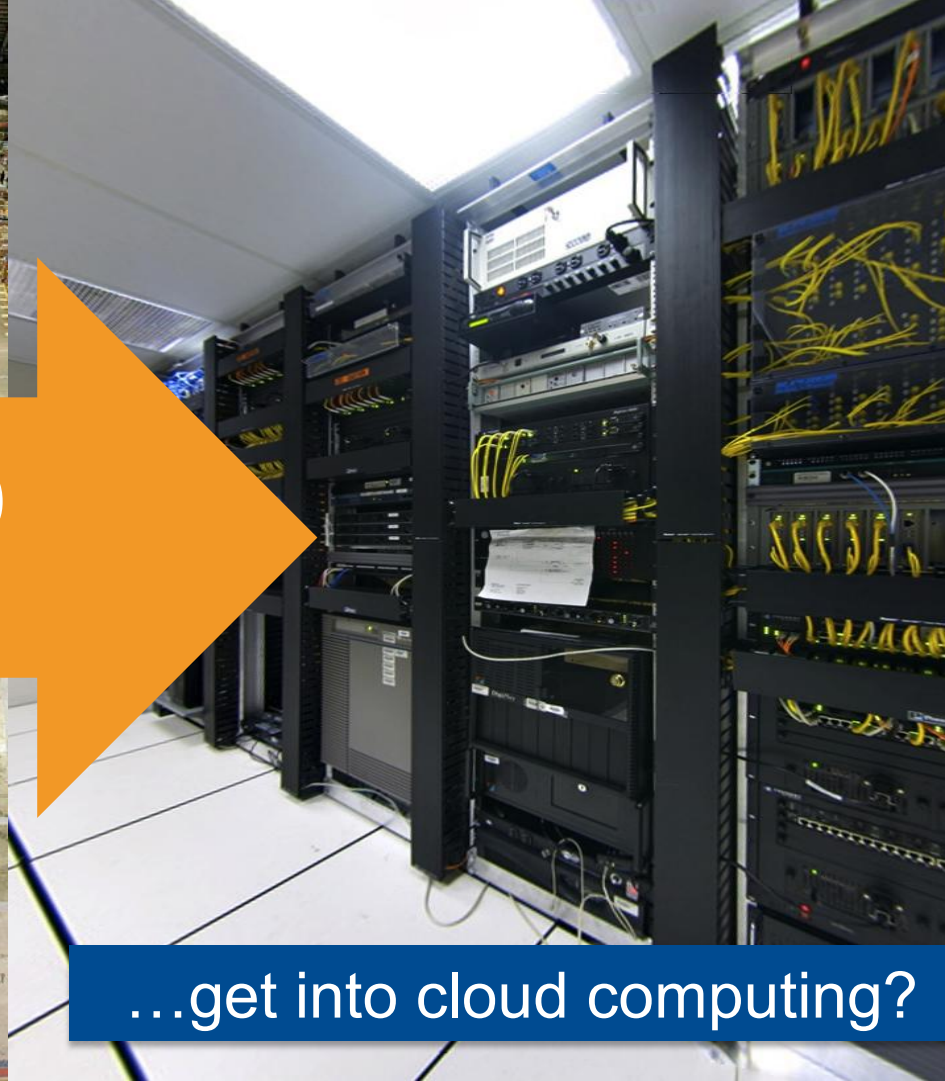
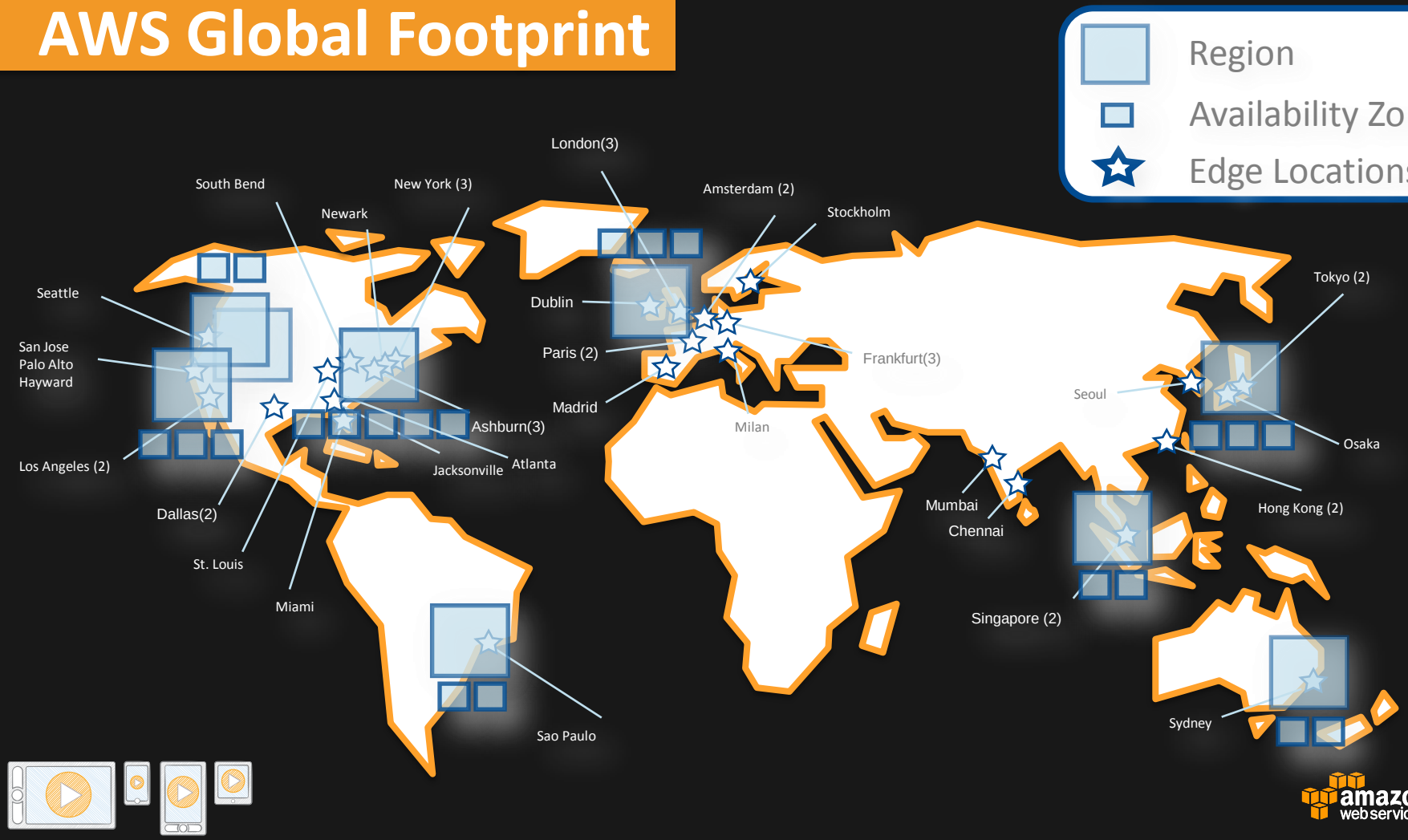


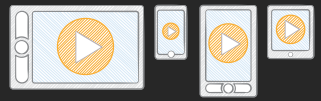
…get into cloud computing?

AWS Global Footprint



MPAA Security Best Practices

- AWS alignment to MPAA Security Best Practices reviewed October 2012
- Based on AWS Shared Responsibility Model
- AWS Services In Scope
  - Amazon Elastic Compute Cloud (EC2), Amazon Virtual Private Cloud (VPC), Amazon Simple Storage Service (S3), Amazon Elastic Block Store (EBS), Amazon Relational Database Service (RDS), Amazon DynamoDB, Amazon VM Import, Elastic Load Balancing (ELB), Amazon Identity and Access Management (IAM), Amazon CloudFront, Amazon Glacier, AWS Import/Export, AWS Direct Connect, Amazon Route 53, Amazon Elastic Transcoder, and the supporting data centers
- Content Types In Scope
  - RAW master, high/low-resolution, watermarked/spoiled, full/partial feature content, stills, clips, frames, shots, sequences, scripts, storyboards, as well as production and post-production deliverable formats in pre- and post-theatrical release windows



Security and Compliance is a Shared Responsibility

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- Facilities
- Physical security
- Compute infrastructure
- Storage infrastructure
- Network infrastructure
- Virtualization layer (EC2)
- Hardened service endpoints
- Rich IAM capabilities

+

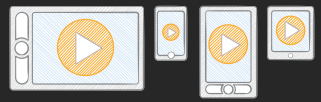
Customer

- Network configuration
- Security groups
- OS firewalls
- Operating systems
- Applications
- Proper service configuration
- Account management
- Authorization policies

=

AICPA SOC | FedRAMP | FISMA | ISO | ITAR | HIPAA | PCI DSS Level 1 Service Provider | FIPS 140-2 | MPAA | ISAE 3402 Type 2

Working with the customer, we can achieve systems validated and certified at very high levels that are *more secure* than traditional systems



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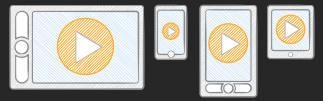
How Is the Cloud Being Leveraged Today?



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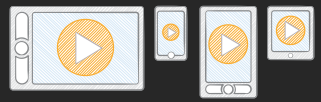
Many Options for Media Consumers…

- More content choices
- More devices to consume media
- Many ways to get the content to devices
- New experiences



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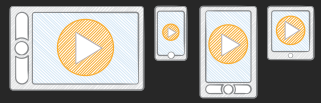
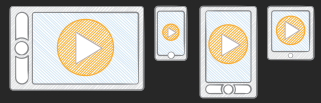
…Means More Monetization Opportunities, Right?



Turns Out There is Massive Complexity



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But How Do You Enable These?

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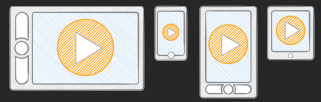

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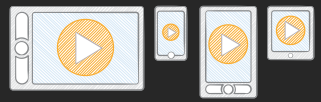

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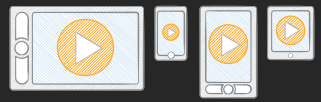

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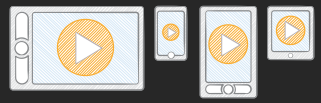

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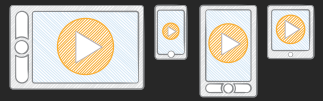
Trends and Where Are Things Headed



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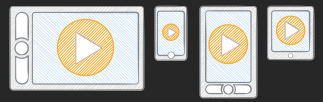
Key Trend #1

Trend: More content and larger content formats leads to ever increasing storage requirements

Implication: Managing storage is expensive and complex; the cloud shifts CapEx to OpEx, freeing resources



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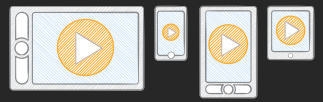
Key Trend #2

Trend: Requirements for processing media at scale will continue to increase

Implication: Strategic use of the cloud *was* a competitive advantage; now it is a core competency



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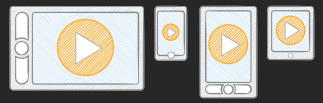
Key Trend #3

Trend: Content movement will continue to be the heavy lifting of media workflows

Implication: Evolving from content transfer to content access will enable collapse of cost structures



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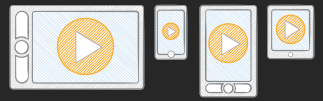
What's Next?



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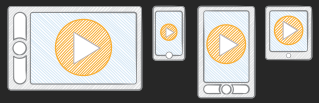
Shifting the Workflow to the Cloud

Physical Requirements

- HD-SDI Connectivity Between Components
- Satellite Transmission & IRDs
- Local SAN
- Editing Bay
- HW Transcoder
- Archive - Tape Drives



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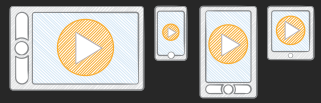
Bridging Into the Cloud

The challenge comes down to **bridging** these **physical world** requirements with the **virtual world** of the cloud



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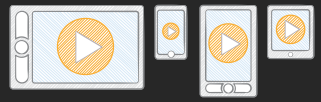
Continuing to Move Up the Workflow

- Post Production
  - Remote/proxy/rough cut editing
  - Visual effects/VXF
  - Rending
  - Content finishing
- Dailies
- Review and Approval
- End-to-End workflows
  - Content creation & capture through distribution managed in the cloud and fully secured



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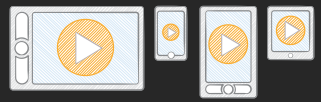
Summary

Key Points

- Use of the cloud for media workflows continues to grow.
- Cloud storage decisions today can be leveraged over and over again in the future.
- Today, content moves to get processed. Tomorrow, processing will move to where the content lives.
- Strategic use of the cloud used to be a competitive advantage, but is now a core competency.
- The cloud enables you to spend more time on better content and less time worrying about the logistics of growth.



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