Connecting to the Cloud: Consumer Benefits

Joshua Danovitz, VP Innovation
January 8, 2014 5pm

"The Cloud" per 2nd Grade Science

Cirrus

Cirrocumulus

Cirrostratus
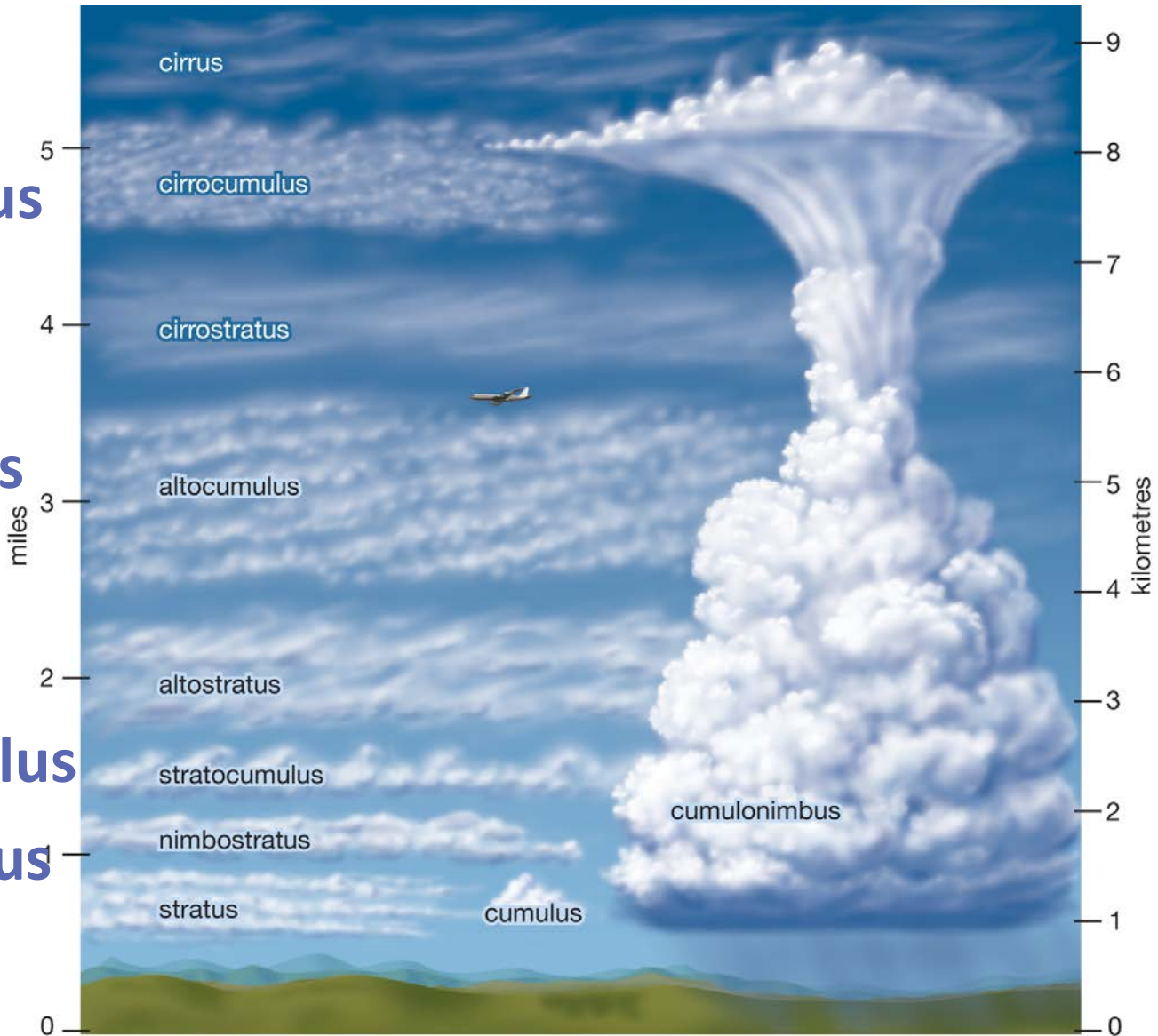
Altocumulus

Altostratus

Stratocumulus

Nimbostratus

Stratus

cirrus

cirrocumulus

cirrostratus

altocumulus

altostratus

stratocumulus

nimbostratus

stratus

cumulus

cumulonimbus

miles

kilometres

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This is Not the Cloud

Also, Not the Cloud

This is The Cloud

This is The *Home* Cloud

But is the Value in the Infrastructure?

What Turns Hardware into The Cloud?

1. Software
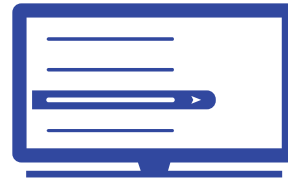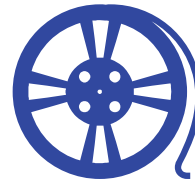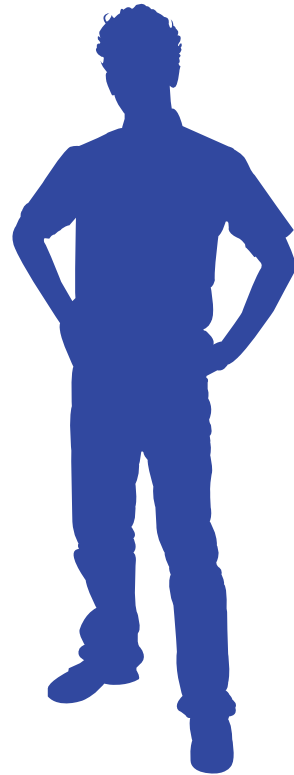
2. Services

3. Applications

Why Do Consumers Love the Cloud

1. Social interaction

2. Personalization

3. Transactions

Consumers Expect Cloud Entertainment...

…But is the Cloud Better For Consumer?

Cloud Entertainment – Grading System

From the consumers perspective, is cloud based solutions entertainment better?

Video Quality

Positive for Consumer	Negative for Consumer
• IP Video reasonable for mobile, tablet, PC • Good enough for TV, but not high quality	• Not as good as dedicated managed TV service • Limited # of TV supported per broadband connection • HD, 3D, 4k, 8k…

Category Grade:

Mobility

<table>
<tr><td style="background-color:green;color:white">Positive for Consumer</td><td style="background-color:red;color:white">Negative for Consumer</td></tr>
<tr><td>

- Video available anywhere there is data (cell & wifi)
- Nearly all new devices support
- City wifi support starting to catch on

</td><td>

- Moving vehicles, with tunnels, buildings and hills can reduce quality, but often works

</td></tr>
</table>

Category Grade: 👍

Video Consumption Experience

Positive for Consumer	Negative for Consumer
• Almost good enough	• Reduced trick-play Flexibility (FF, RR, Slow Motion) • Buffering • Video quality changes when trick-play used

Category Grade:

Choice and Competition

Positive for Consumer	Negative for Consumer
• Exploding choices for video sources (Live, VOD, OTT, Web) • Pricing differences visible to consumer • No longer have single choice of PayTV on for TV viewing	• Hard to find content • Must have many billing relationships

Category Grade:

Privacy and Consumer Data

Positive for Consumer	Negative for Consumer
• Providing data results in recommendations, suggestions, social interaction… • Little recorded negative impact to date	• Data is flowing back to providers, which can spook consumers • Multiple providers means difficult to know where data is going • Potentially more ads and spam

Category Grade:

Search & Discovery

Positive for Consumer	Negative for Consumer
• Video data becoming detailed and available • Cloud perfect to enable 3rd party services to access various databases to provide Search and Discovery	• Results will be limited by maturity of data • Integrated service providers may be limited by commercial deals (e.g. Apple and Amazon don't play well together)

Category Grade:

Personalization

Positive for Consumer	Negative for Consumer
• Using the consumer data, it is possible to correlate usage and ratings with recommendations • Much more likely to find something good to watch, when there personalization features are high quality	• Few good implementations of cross library personalization • Users can get spooked by recommendations, and feel "watched"

Category Grade:

Social

Positive for Consumer	Negative for Consumer
• Second screen social interaction starting to be quite good • Social networks integrating with video data, and ramping time based interactions • Recommendations from social network desired	• Social seems like interruption after initial novelty wears off • First screen implementation often poor and clumsy • Current implementations still leave a lot to be desired

Category Grade:

Grade Summary:
Overall, Cloud provide great value to consumer

Video Quality	👎
Mobility	👍
Video Consumption Experience	👎
Choice & Competition	👍
Privacy & Consumer Data	👍 👎
Search & Discovery	👍
Personalization	👍
Social	👍 👎

Is nDVR Better Than DVR?

Positive for Consumer	Negative for Consumer
• Unlimited ability to upgrade storage on the fly • Access to "My recorded content" on every screen • Common pause points • Cross-platform suggestions & recommendations • Deep Social integration	• Operators may limit consumer control of video • Inconsistent content rights • Potentially limited integration with Web and OTT content • Cost of devices a new burden for consumers

Category Grade:

Thank you
joshua@tivo.com