



## Leveraging Flash Storage in a Cloud-based World

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# SANDISK SOFTWARE & SOLUTIONS GROUP

DRIVE **INNOVATION** around  
and SUPPORT **DEMAND** for

## PRODUCTS & SERVICES



## INITIATIVES

**HQITE**  
HIGH QUALITY MOBILE EXPERIENCE™

**SanDisk®**

# MASSIVE MOBILE VIDEO GROWTH

BY 2015 GLOBAL  
MOBILE DATA TRAFFIC  
WILL EXCEED  
OVER

NETFLIX WILL ACCOUNT FOR  
30% OF PEAK DOWNSTREAM  
INTERNET TRAFFIC

93%

30%

Sources: Sandvine May 2011; IDC Internet consumer traffic analysis, 2010; McKinsey report on "Big Data"; Cisco VMI 2010; FCC 11/30/10; Expert interviews; Facebook.com; Rysavy Research; NYU Stern School of Business; Nielsen Research; IDG; comScore; GSA; Bytemobile; FierceWireless; Allot Communications - MobileTrends Report H1,2011

# MOBILE VIDEO EXPERIENCE – DEMANDING USE CASE

Pure Streaming Dominant Today

Enhanced Video Delivery – Caching

“when users encounter mid-stream rebuffering

**81% BAIL OUT ON THE VIDEO.”**

Source: TubeMogul 2010

Rebuffers  
Degraded  
Slow Response  
Congestion  
High Drain

**Jitter**  
**Quality**  
**Latency**  
**Network**  
**Power**

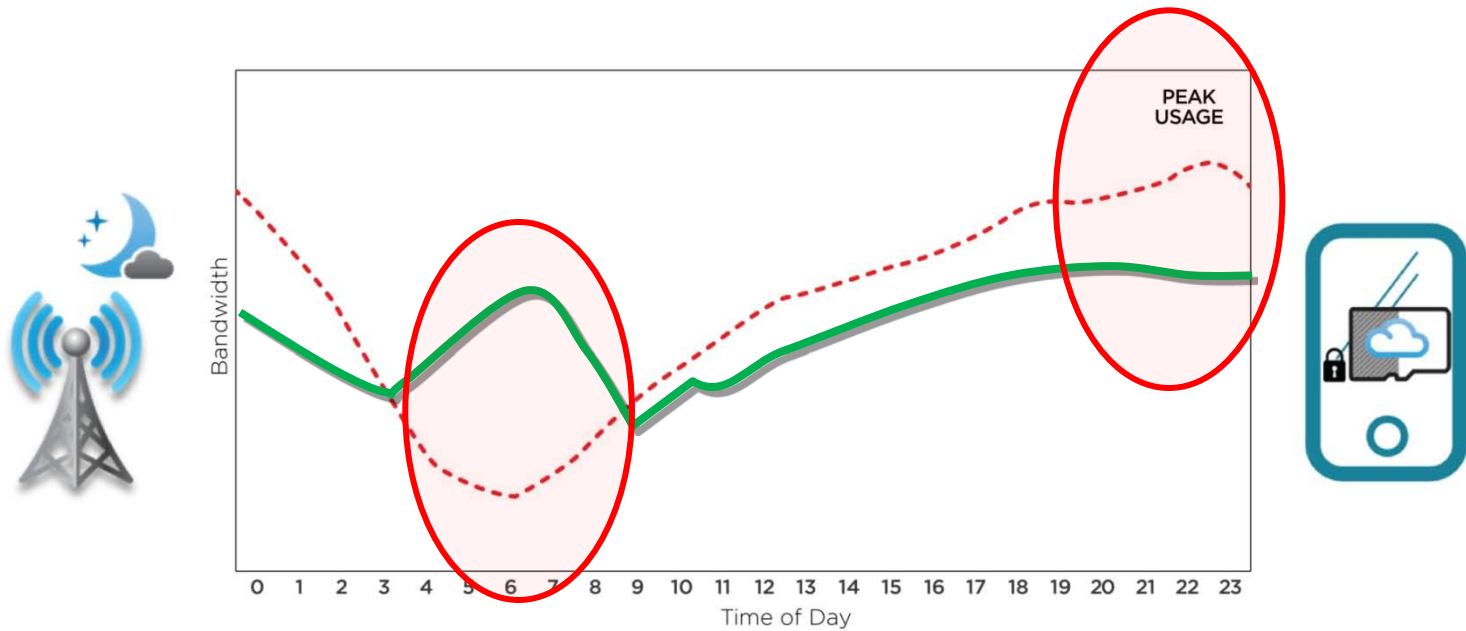


# SOLUTION: LEVERAGING THE TRUE EDGE OF THE NETWORK

- Better quality
- Better performance
- Better for everyone
  - End-user
  - OEM
  - MNO
  - Content Provider
  - App Provider



# POTENTIAL FOR NETWORK IMPACT



Source: NICTA 2010

## Growing Significance

- More smartphones
- Greater file sizes for content
- Extreme multimedia device capabilities

# HOW CAN WE DO THIS?

## MANUAL CACHING

Favorite music and video  
My Files – always with me  
My purchased content

## EXPLICIT DATA CAPTURE

Channel subscriptions  
Magazine subscriptions  
“Pinned” music  
Overnight movie rentals

## IMPLICIT DATA CAPTURE

Most popular content  
Best-of Genre picks  
Predictive algorithms  
Daily news picks  
Social network feeds



# WHO CAN DO THIS?



## CONTENT OWNERS

- Rights
- Business models
- Security



## FLASH PROVIDERS

- Supporting use cases
- Managing to required endurance
- Integrated technology



## DISTRIBUTORS

- Business models
- Prediction engines
- Caching distribution techniques



## DEVICE MANUFACTURERS

- Application design
- Business models
- Security and caching technology



## CARRIERS

- Network optimization
- Business models and partnerships



# HQITNE

HIGH QUALITY MOBILE EXPERIENCE

An industry initiative to better **leverage local storage** in the delivery of rich media, particularly over mobile networks



# Join Us Today

- **Contact SanDisk**
  - [michelle.lee@sandisk.com](mailto:michelle.lee@sandisk.com)
- **Learn more about HQME**
  - [www.hqme.org](http://www.hqme.org)
- **Get involved!**

Backup Slides

## USE CASE – EPISODIC TV

RENNER MADE THE  
THESE FEATURES ON  
**INSTANT PLAY**  
HER TABLET WAS THE  
**HIGH QUALITY**  
BURNER EPISODES  
OF HER FAVORITE TV  
SERIES HERE  
SHOW.

