sandvine
Intelligent Broadband Networks

Using Analytics to increase revenue and reduce churn

A Use case example

Agenda

- Sandvine
- Market trends
- Service provider challenges
- Examples of service/charging plans
- Case study

Building Intelligent, Profitable Networks

Sandvine creates intelligent broadband networks that deliver insightful **business intelligence**, **increased revenue**, and **reduced costs**, with exclusive focus on communications service providers (CSPs)

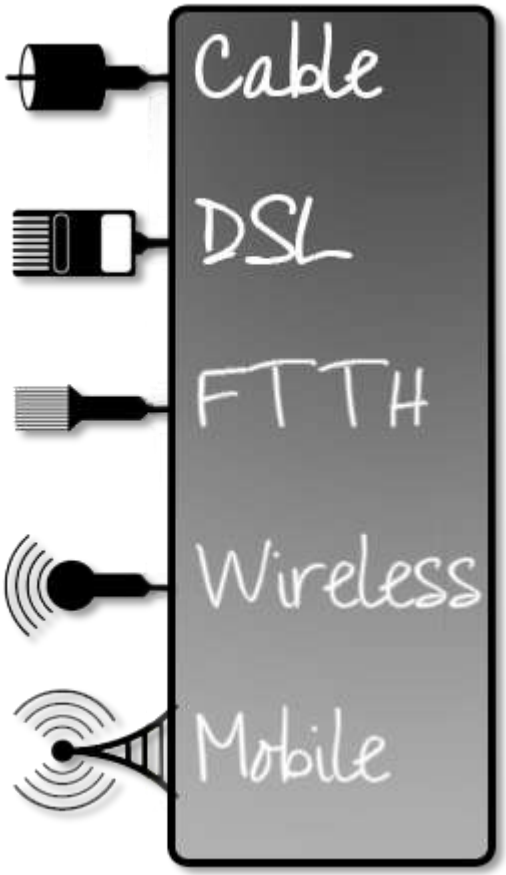
Delivering unparalleled network **business intelligence**

Increasing revenue by enabling new services and streams

Reducing costs by deferring capital and improving operations

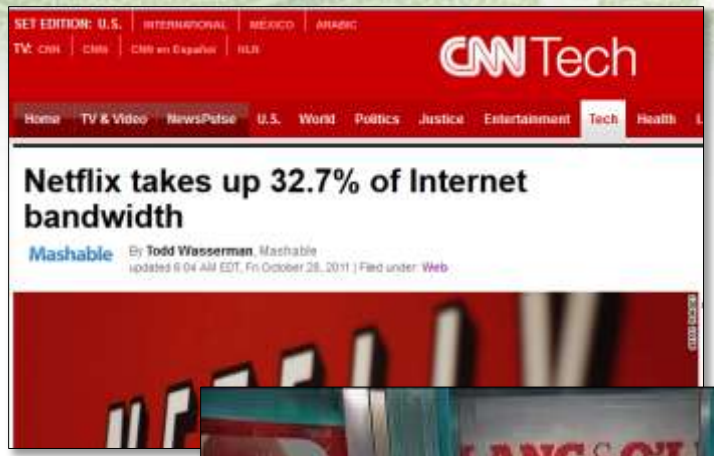
Sandvine, At a Glance

- Market share and innovation leader
  - Delivering more powerful solutions, sooner
- Deployed by >200 CSPs worldwide, serving >300 million subscribers
  - Any access technology, any scale
- Trusted global telecoms vendor
  - Founded in 2001, listed on TSX & LSE
  - ~$90 M (USD) annual revenue
  - >500 employees
  - Regional support, services and sales
  - HQ in Waterloo, Canada



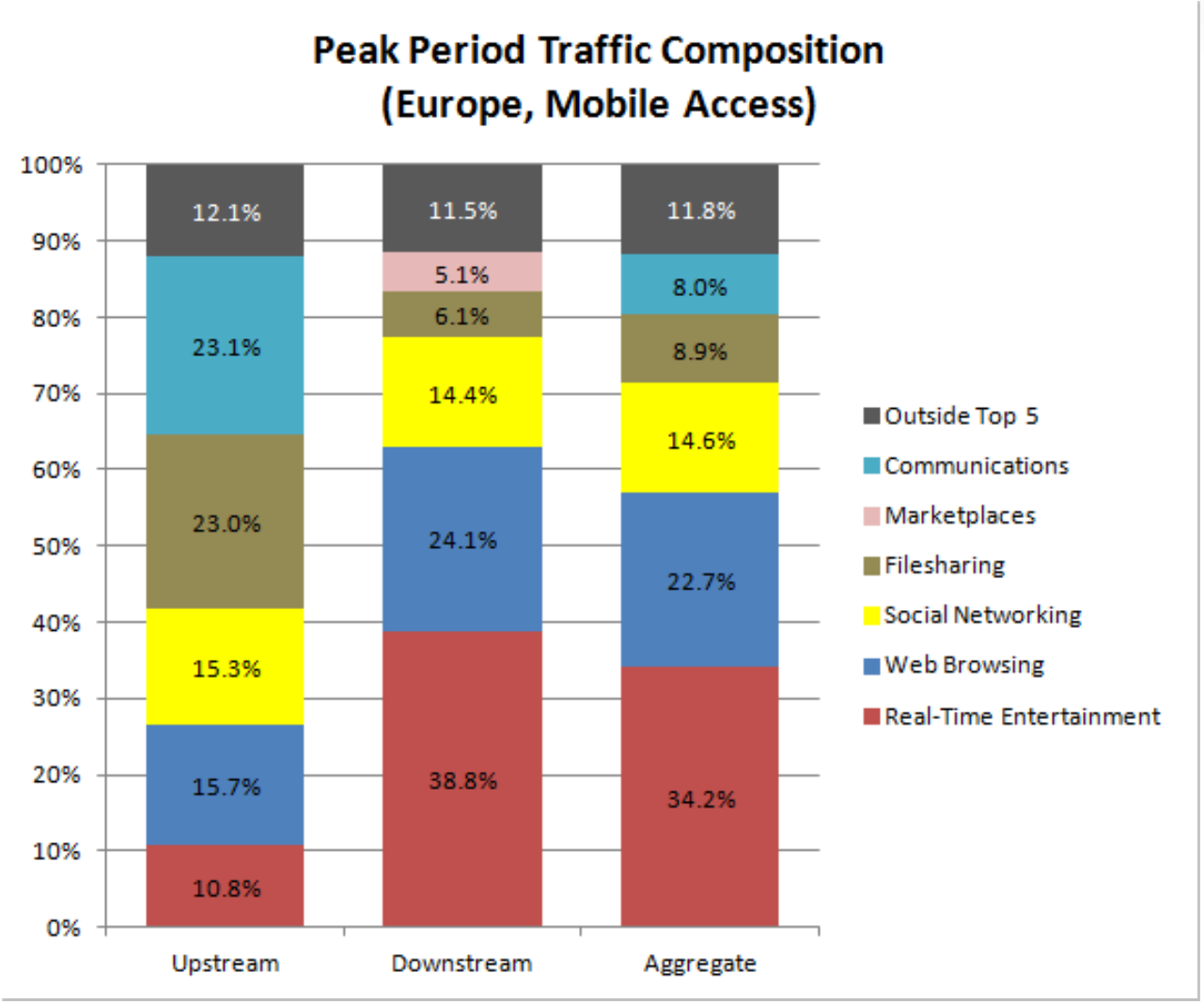
Chosen by Leading Operators Worldwide

Recognized Experts in Consumer Traffic

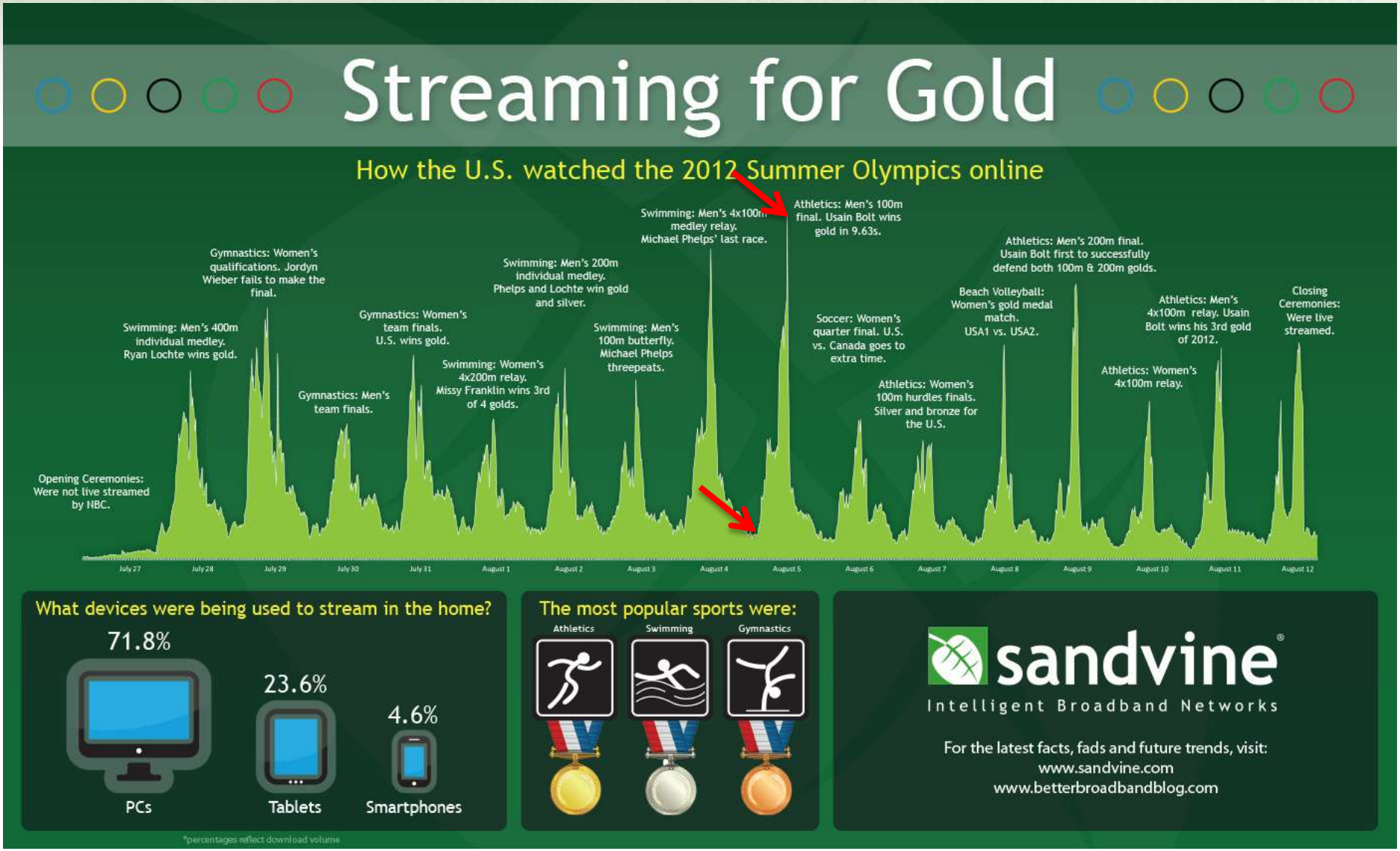


Europe, Mobile Access

Global Internet Phenomena Report



Peaks are much higher than average



Service Provider Challenges

- Bandwidth and usage goes up but revenue is not always
- Find something consumers see value in and understand
- Give them price certainty on this
  - Drives higher usage
- Align price certainty with cost
  - Might not be 100% linear
- Ignore the variable cost of bandwidth
  - E.g. 1MB of Instant Messaging is more expensive than 1MB of P2P file sharing due to signalling

Segment Subscribers and Uncover Opportunities for Upsell and new services

Mobile operators require the flexibility to respond to rapidly-changing market behaviors & subscriber usage habits. With knowledge of broad revenue trends & how subscribers are using existing services, operators can optimize existing subscriber plans & support the launch of new services that maximize customer satisfaction.

Key Benefits:

- Introduce new revenue-generating services
- Optimize existing subscriber plans
- Reduce revenue leakage

Individualized Plans

Every subscriber is an individual, and has very specific habits and priorities. Increasingly, subscribers are looking for service plans that can be individualized, with the understanding that a personalized plan offers greater value.

Key Benefits:

- Increased revenue from new subscribers
- Increased revenue from subscriber loyalty/stickiness
- Increased revenue from customized subscription add-ons
- Competitive/brand differentiation

Shared Wallet: Multi-Device Plans

"Customers don't want individual accounts for each device, **it drives them crazy**, and would raise our costs…So getting to one bill and **going to account-based pricing** is the way to go."

- Lowell McAdam, President and CEO of Verizon

Key Benefits:

- Gain new subscribers, through service provider consolidation
- Increased revenue from new subscriptions and subscribers
- Increased subscriber loyalty/stickiness
- Competitive/brand differentiation

Application-Based Tiering

Application-based tiers leverage the facts that subscribers place a different value on each application they use, they are attracted to price certainty, and they appreciate personalization.

Key Benefits:

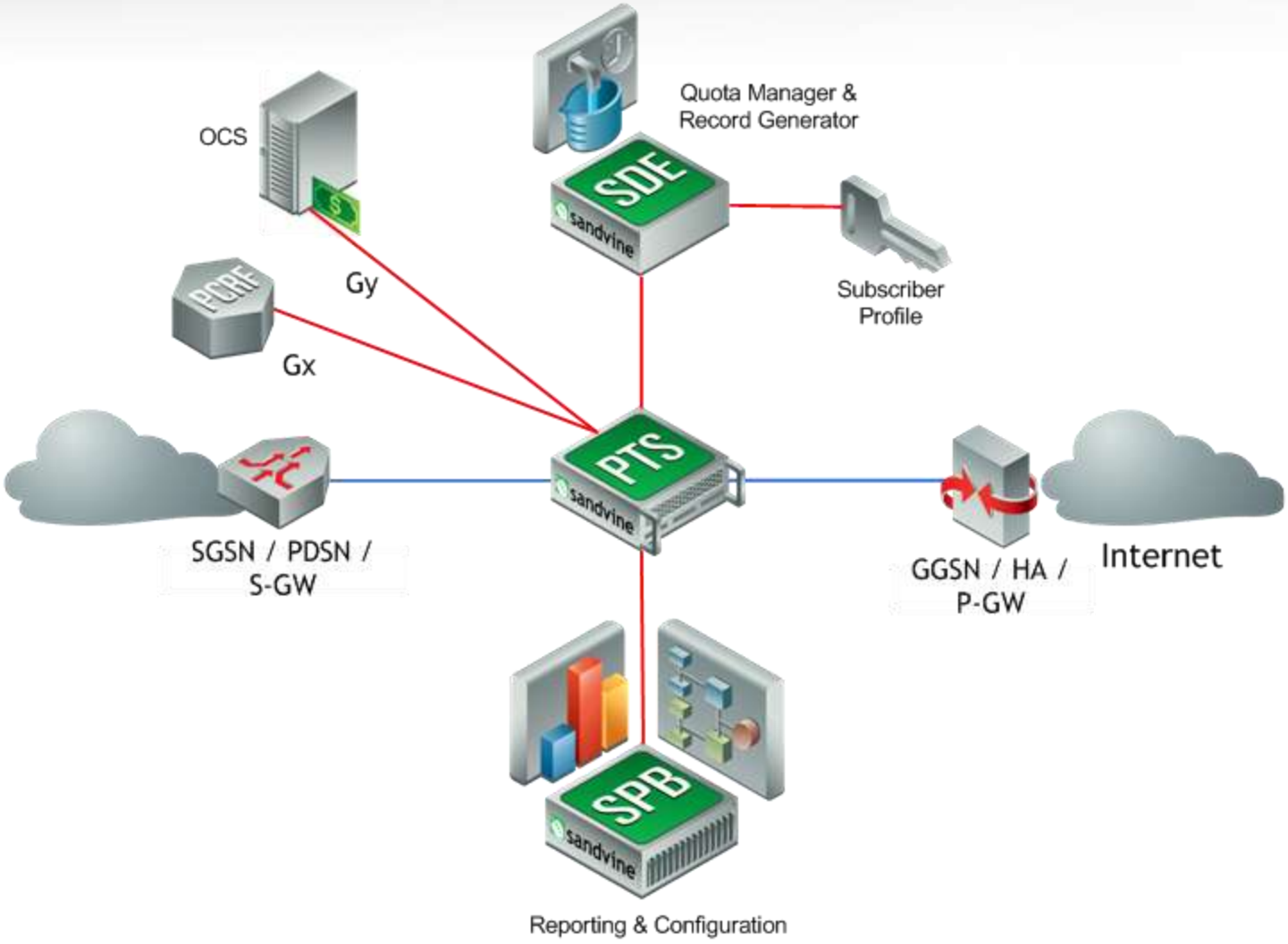
- Increased revenue from addition of new subscribers
- Increased ARPU, even in price-sensitive markets
- Predictable cost to service provider
- Brand awareness and competitive differentiation
- Increased purchase continuity

Actual Sandvine Implementation

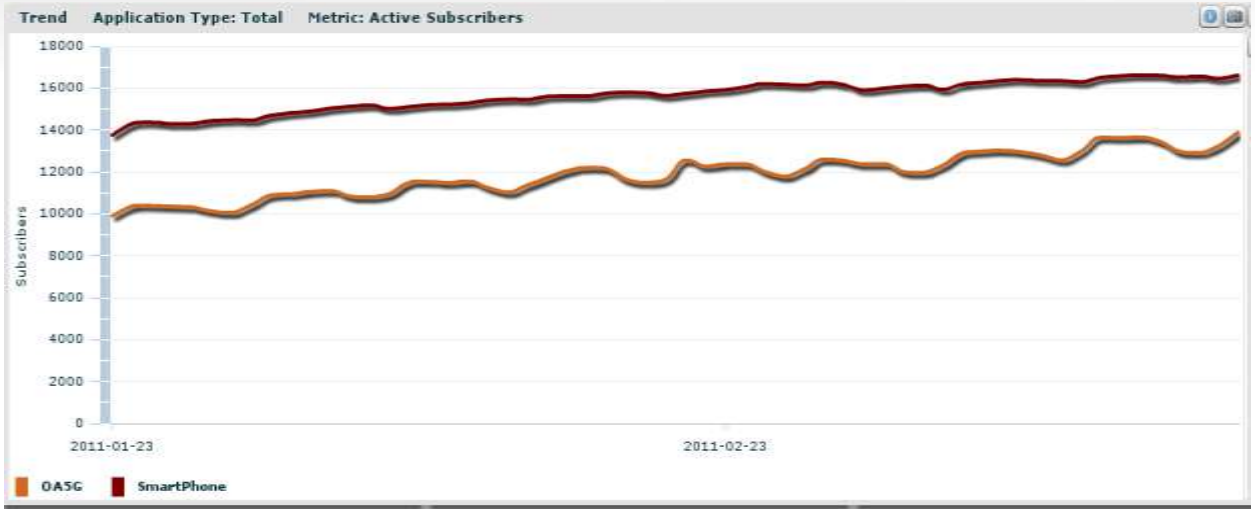
The case study

- South American mobile operator
- 3 month study
- Plans include smart phone (1G data allowance), 2G, 5G, 10G, 20G dongle plans
  - Plus top-up packages
- ARPU on voice is shrinking
- ARPU on data is flat
- Price sensitive customer base
- Smart phones largely prepaid
- **The mission**: increase ARPU at a higher rate than cost

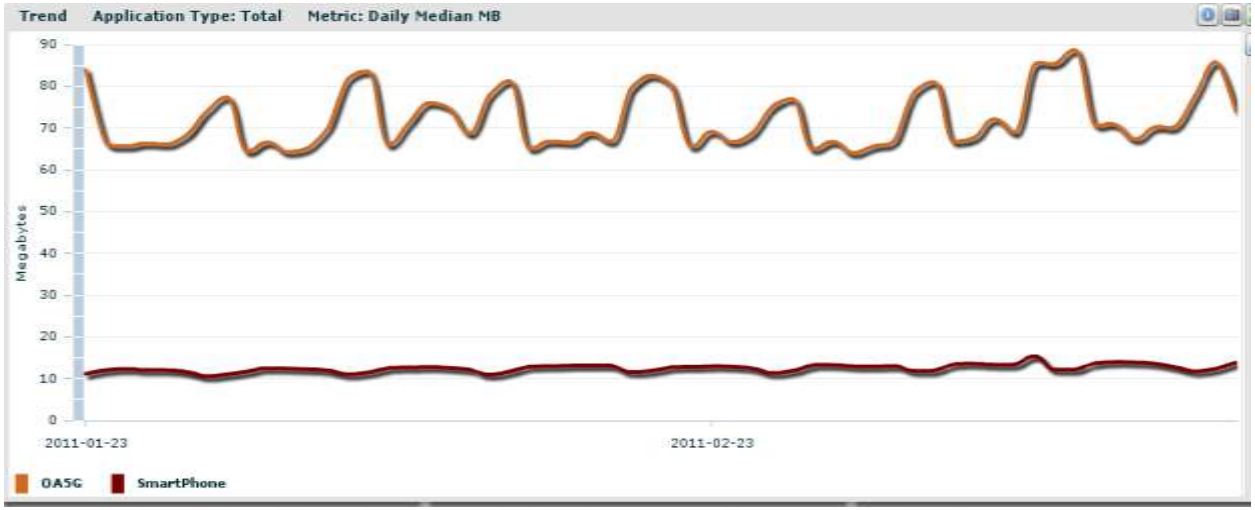
Mobile Solution Architecture



Analysis of the two most popular plans

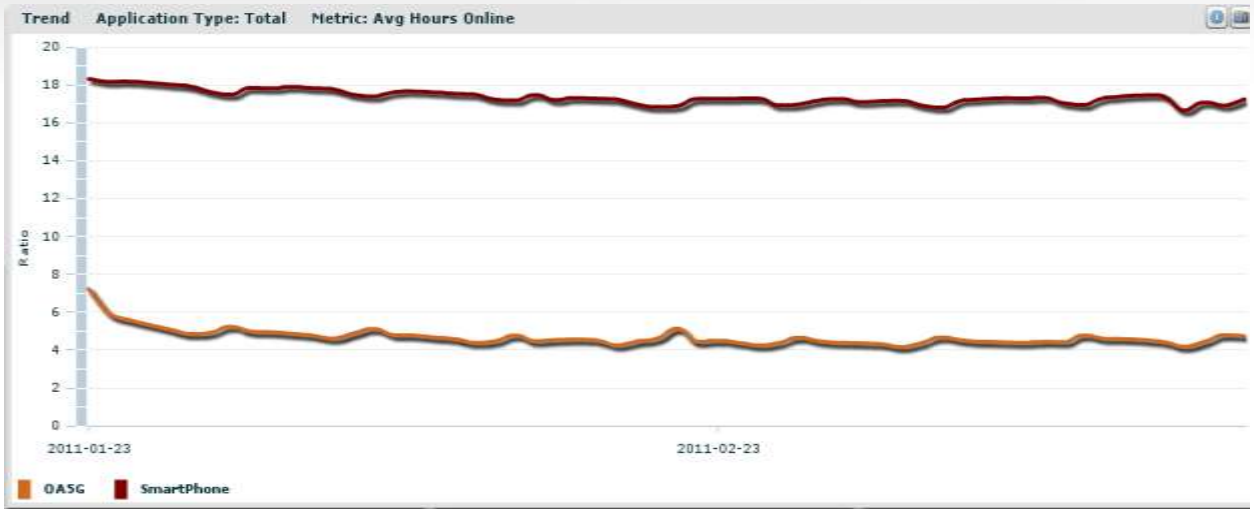


Steady growth in subs
Less churn in smart phone

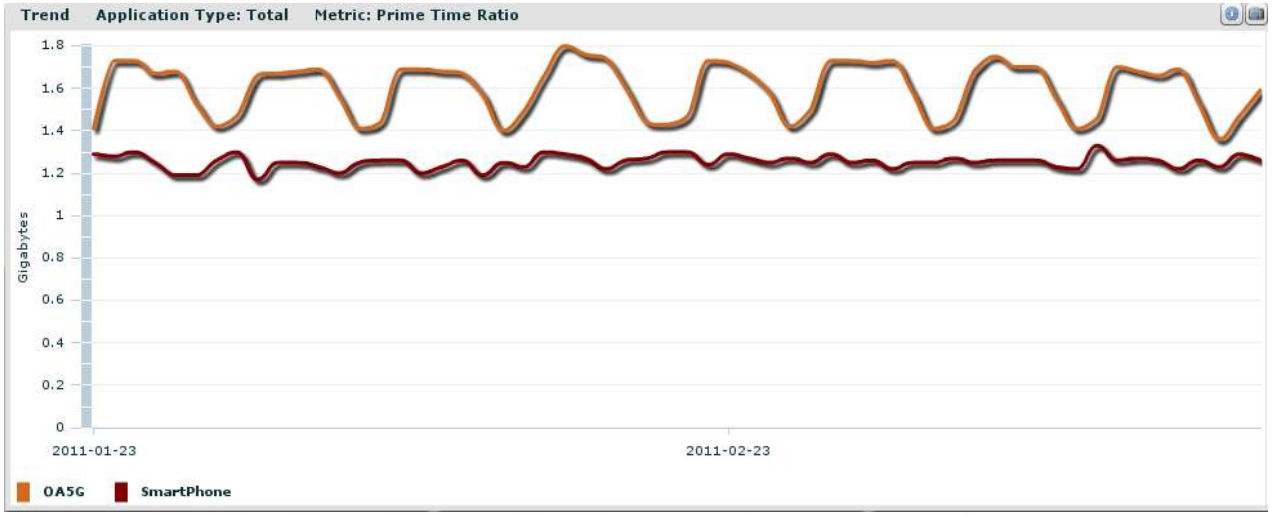


Dongle subs use ~8x bw/day
Higher day to day variation in dongle
Median usage ~flat over study period

More about most popular plans

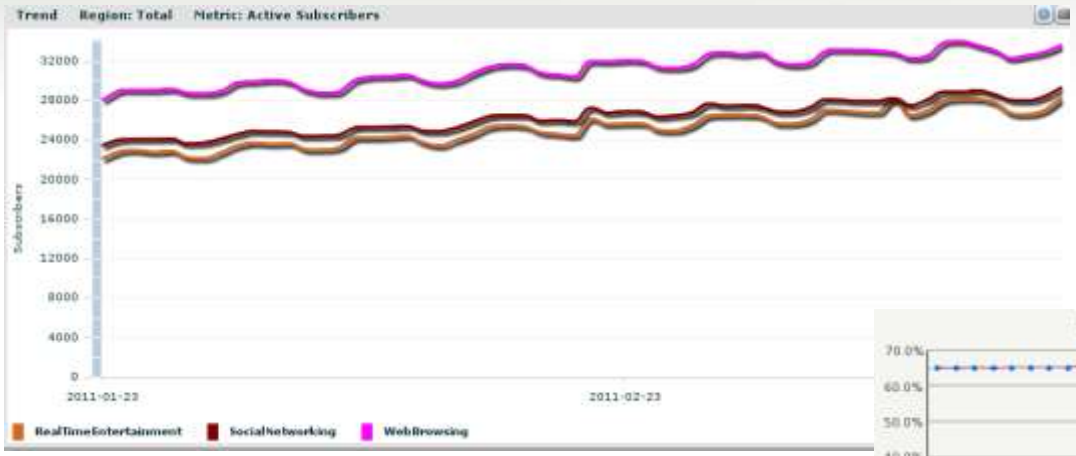


Phones online ~18hrs
Laptops online ~4hrs

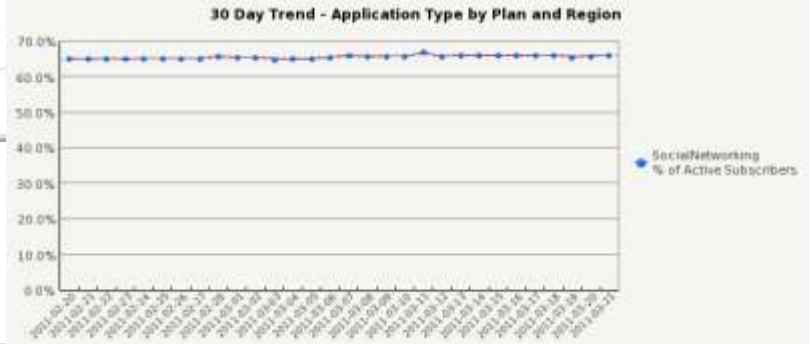


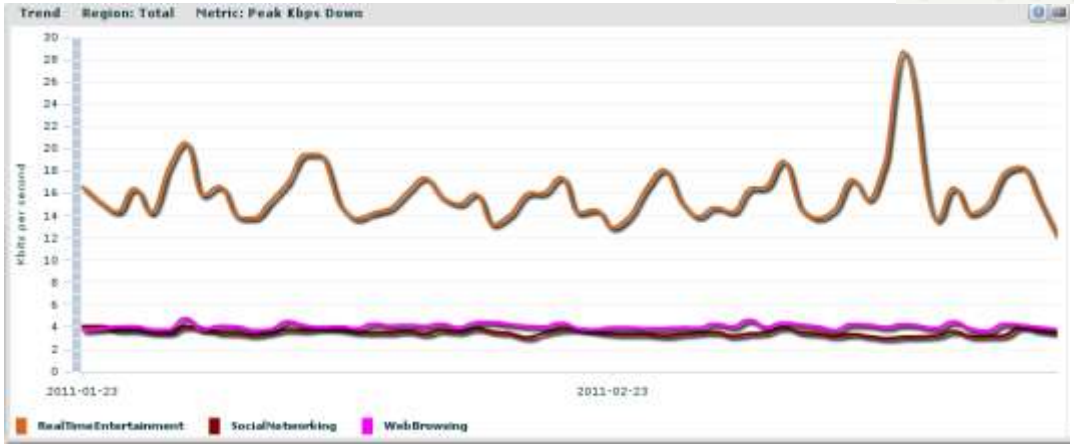
Laptops have ~2:1 peak ratio
Phones have ~1.2:1 ratio

Dig into applications



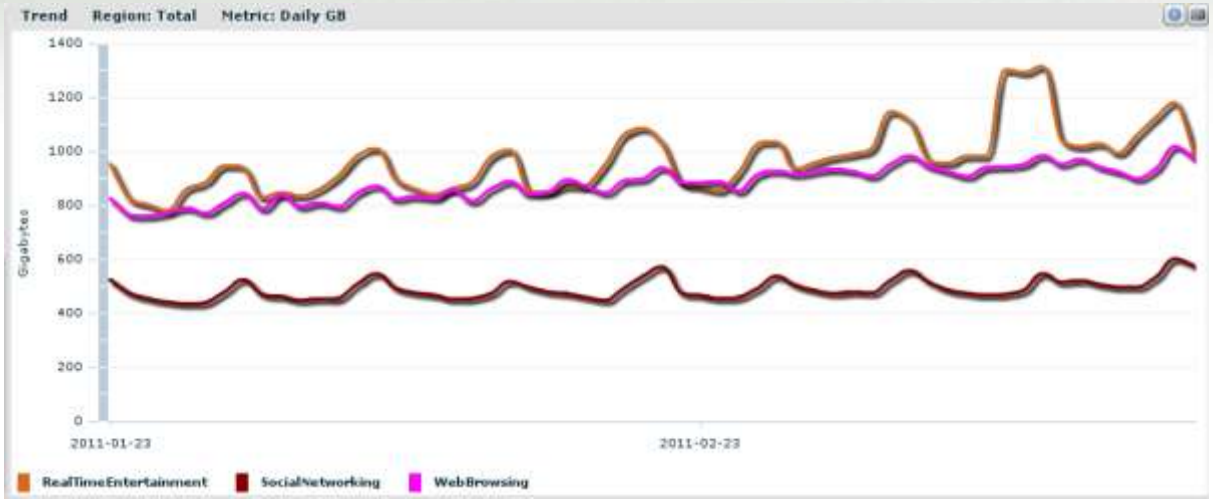
Streaming, social media, web are very popular apps
~65% of online smart phone Subs using social media



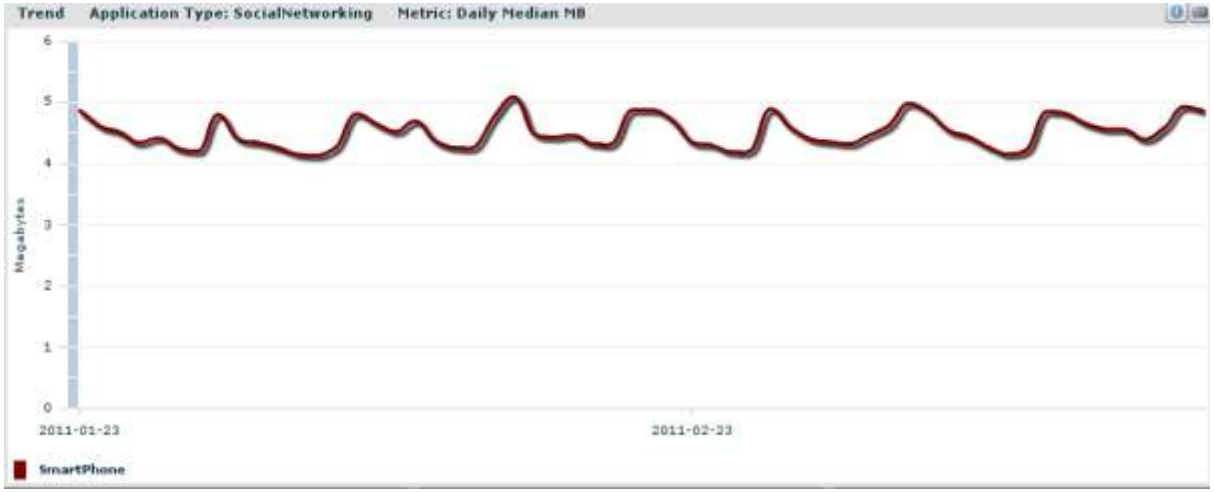


But hugely different peak Rate for streaming!

Dig into social media



Streaming and web have similar median usage (Bytes)
Social media is much lower



Typical social media user draws ~5MB/day of bandwidth

What have we learnt

- Laptop (dongle) users generate significantly more traffic than smart phone users ...
  - Not that surprising
- But smart phone users are online significantly more hours than laptop users
- Most popular applications are Web, Streaming and Social Media
- About 65% of smart phone users use Social Media applications
- Which generates about 5MB usage per day
  - In comparison, Streaming is 2 to 3 times more

What have we learnt contd.

- Smart phone users are
  - online a large amount of time
  - Use social networking for much of the time
  - Use little data (~5MB/day) doing so
- This is a perfect carve-out: high-value data that is low-impact
- If we give them price-certainty, they may use more data in return
- $5/unlimited social lead to ~20MB/month (~14%) additional usage/user, compared to $5/100MB top-up (or included with 1GB base)
- Price certainty drives users to buy this instead
- Pure ARPU & margin

What did we implement?

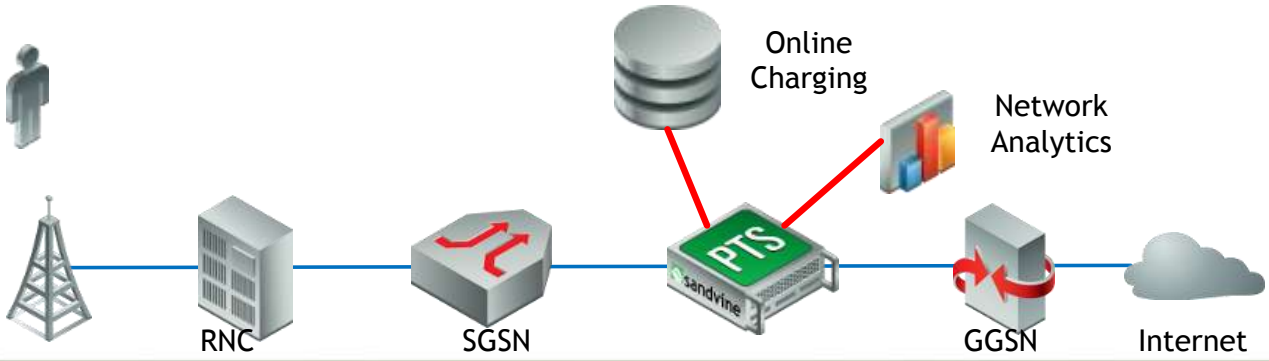
Customer feedback

"Working with Sandvine since 2008 has brought us closer to understanding and acting on the needs of our customers, **while improving revenue opportunities** and the cost-effectiveness of our network."

Vicente San Miguel – CTO

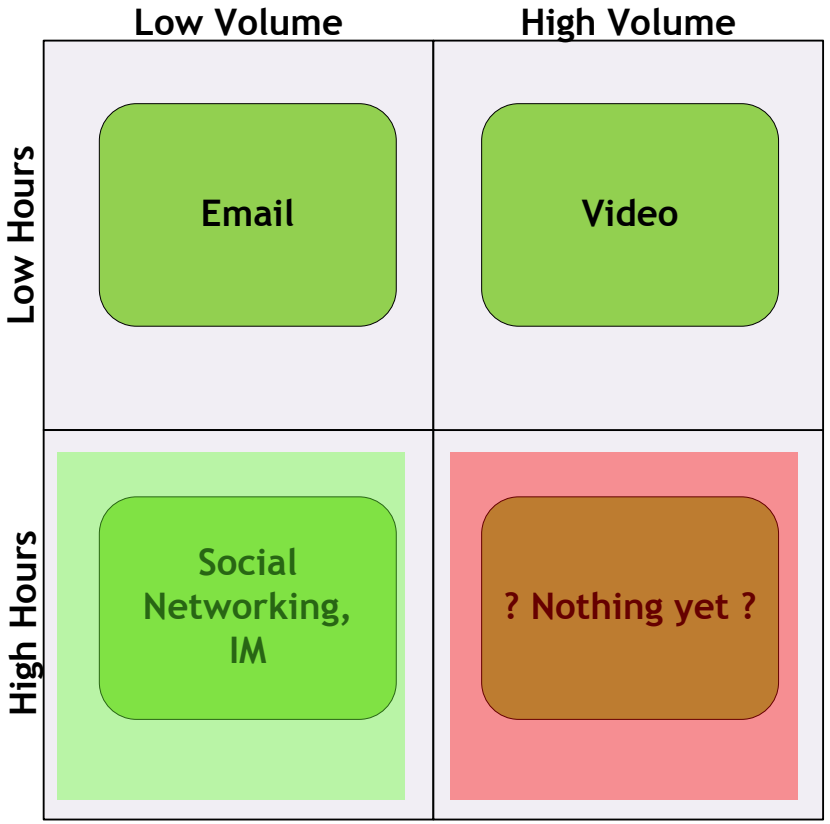
Key requirements to implement

- Access vendor agnostic charging
- Real-time Gy interface to online charging system
- Network analytics to predict affect, model plans
- Use events, time, ‘unlimited by type’ to be predictable to user



Segmentation: Cherry-pick profitability

- Find something the user values more than average (hours spent) that doesn't cost more than average (bytes transmitted @ peak)
  - Need strong analytics
- Put it in price-certain terms
  - E.g. Unlimited, by time, by # of events
- Use value-based pricing
- Stay away from fast-growing volume services like video
- Focus on smart phone, not dongle



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Thank you

Questions?