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# Pricing User-Sanctioned Dynamic Fast-Lanes Driven by Content Providers

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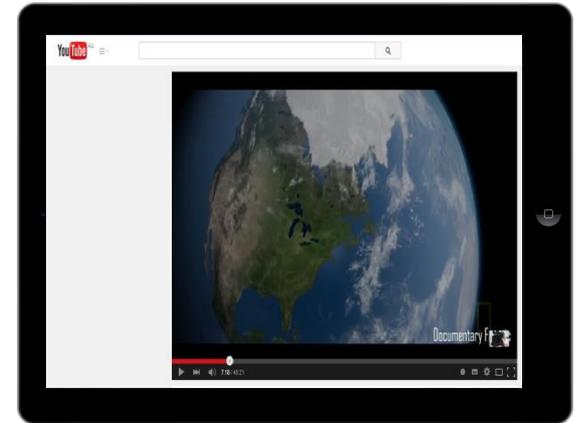
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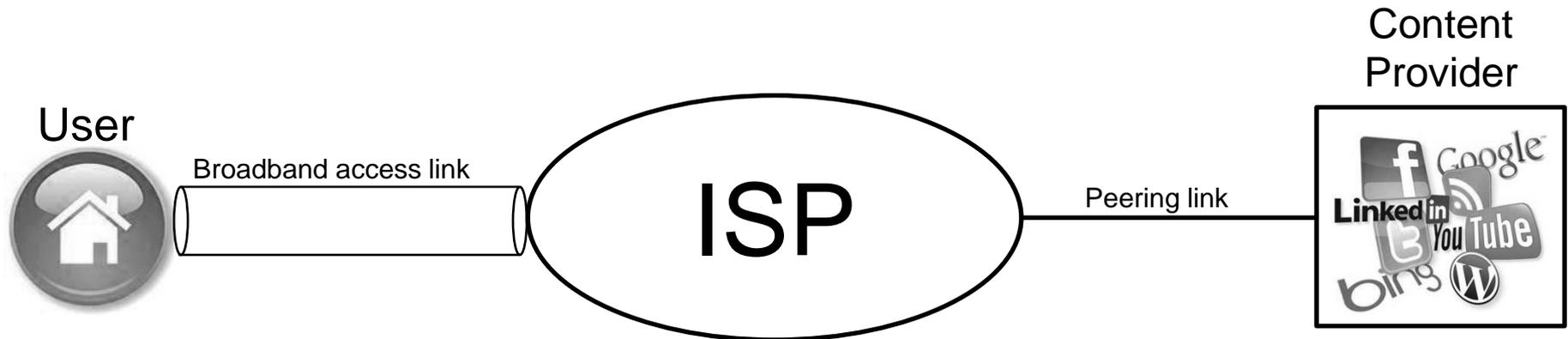
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A U S T R A L I A

# Overview

- Current debate
  - static arrangement
  - users are left out
  - concerns of net-neutrality
  
- A different approach:
  - dynamic
  - users have control
  - More palatable to content providers, users and ISPs



# fast-lanes



- **For:**

- improved QoE

- **Against:**

- no voice

- **For:**

- \$\$ from new service

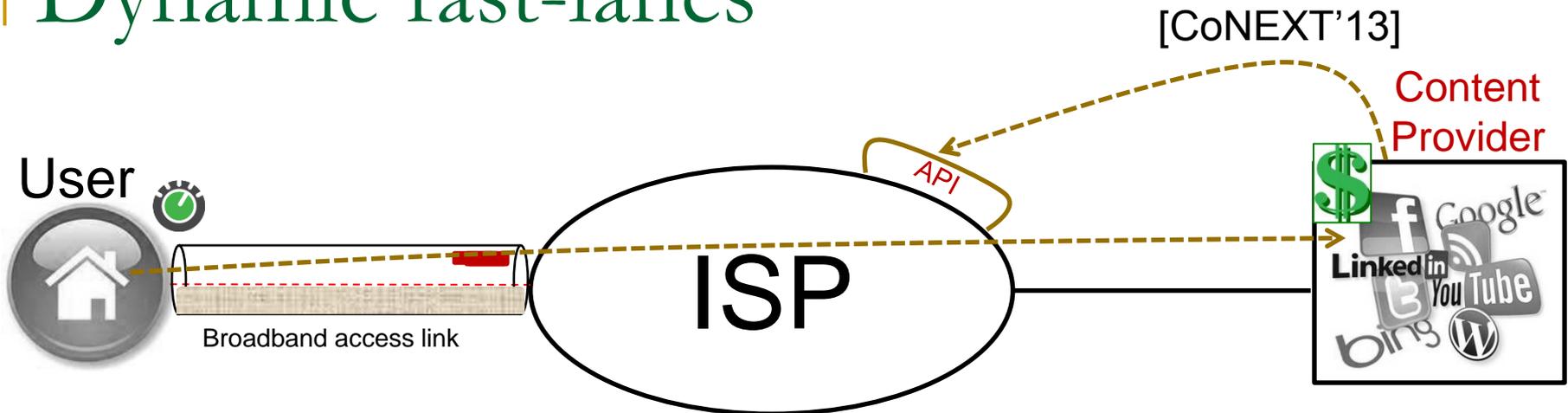
- **For?**

- \$\$ from better user engagement

- **Against:**

- unfairness
- not open?

# Dynamic fast-lanes

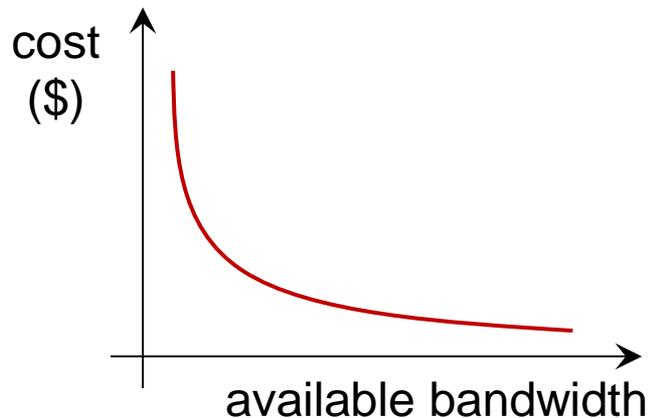


- Users control
  - single knob
- CPs control
  - open APIs for (any) content provider
  - on-demand: at certain level of congestion to match their business
- ISP
  - charge on admission

# Economic model (Intuitive)

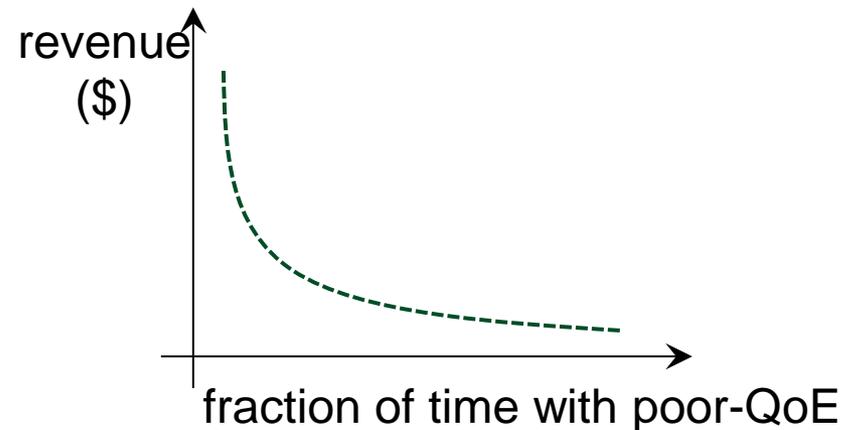
## Fast-lane pricing (by ISP)

- Price = f (spare-capacity)
  - high load → low spare-bandwidth → high price



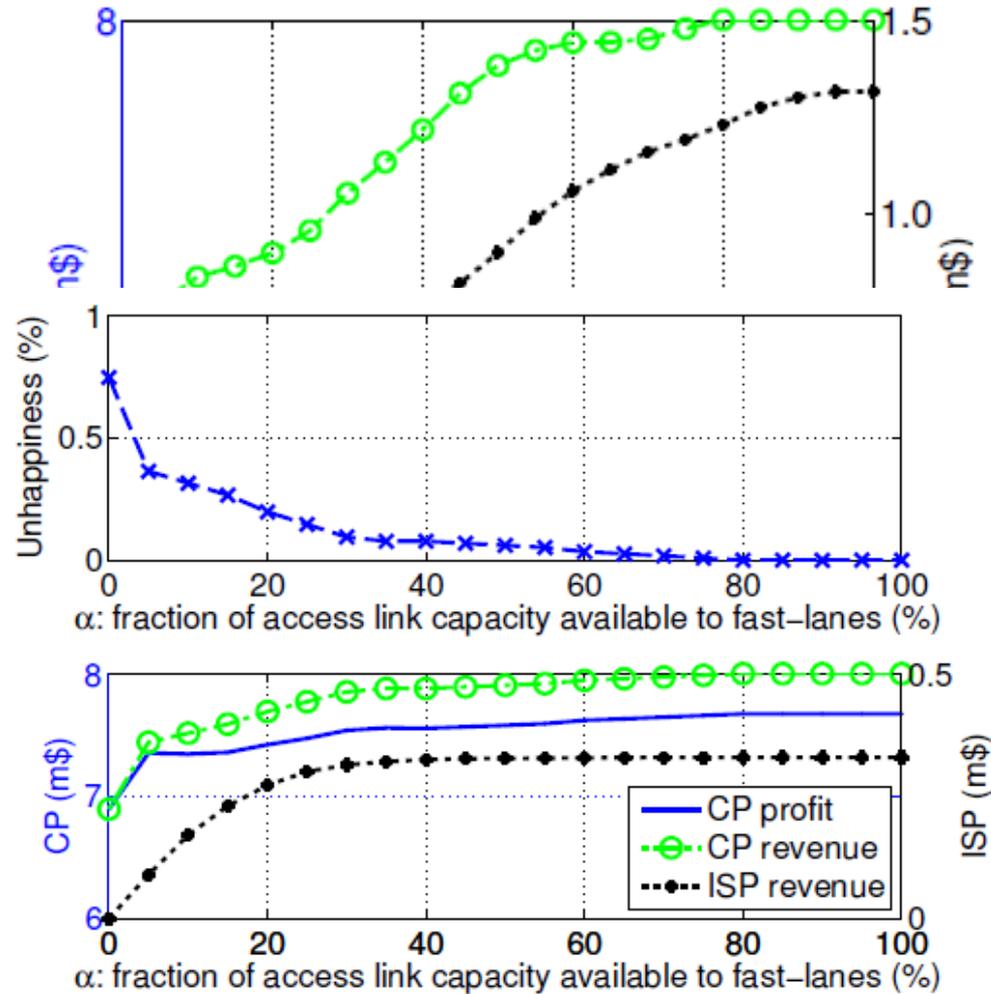
## Content Provider revenue

- Revenue = f (QoE)
  - Poor QoE → less engagement → revenue loss



# Results: benefit for ISP/CP/User

- ISP benefits
- CP's gain dictated by model parameters
  - maximized at moderate load at which CP calls API
- User video QoE improves
  - at no extra cost
  - no change of behaviour



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# Conclusions

- Different approach for fast-lanes
  - dynamic
  - user involvement
- Potential “win-win-win” for all parties involved
- Complex problem