



CHARLES RUSSELL

Interconnection and NGNs –
Regulatory Challenges:
Market Power

Andrew Sharpe
3 May 2007





Questions

- ◆ What new kinds of market power does NGN enable?
- ◆ What old kinds of market power disappear in the NGN world?
- ◆ What is the impact of bundled services on regulated tariffs – is there any reason to regulate end user tariffs in an NGN world?



Market power and NGNs

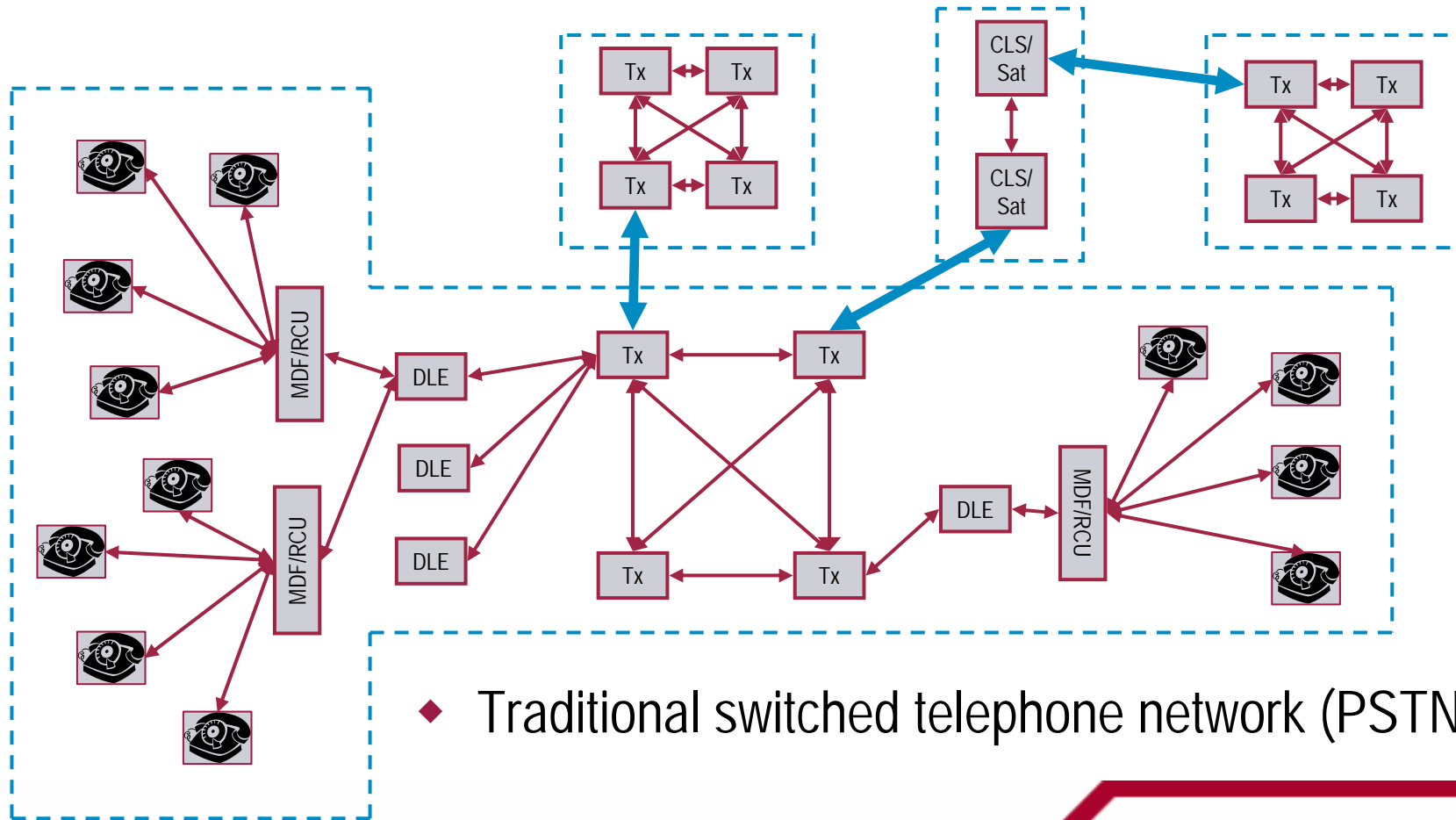
- ◆ Why consider “market power”?
 - ◆ role of a telecommunications regulator
 - ◆ promote effective and sustainable competition at the deepest level
 - ◆ *“significant market power”* or *“dominance”*
 - ◆ *“ex ante”* versus *“ex post”*
- ◆ Competition law in the Arab region
 - ◆ No known competition law
 - ◆ Competition provisions in telecommunications laws
 - ◆ Section 65 of Bahrain Telecommunications Law



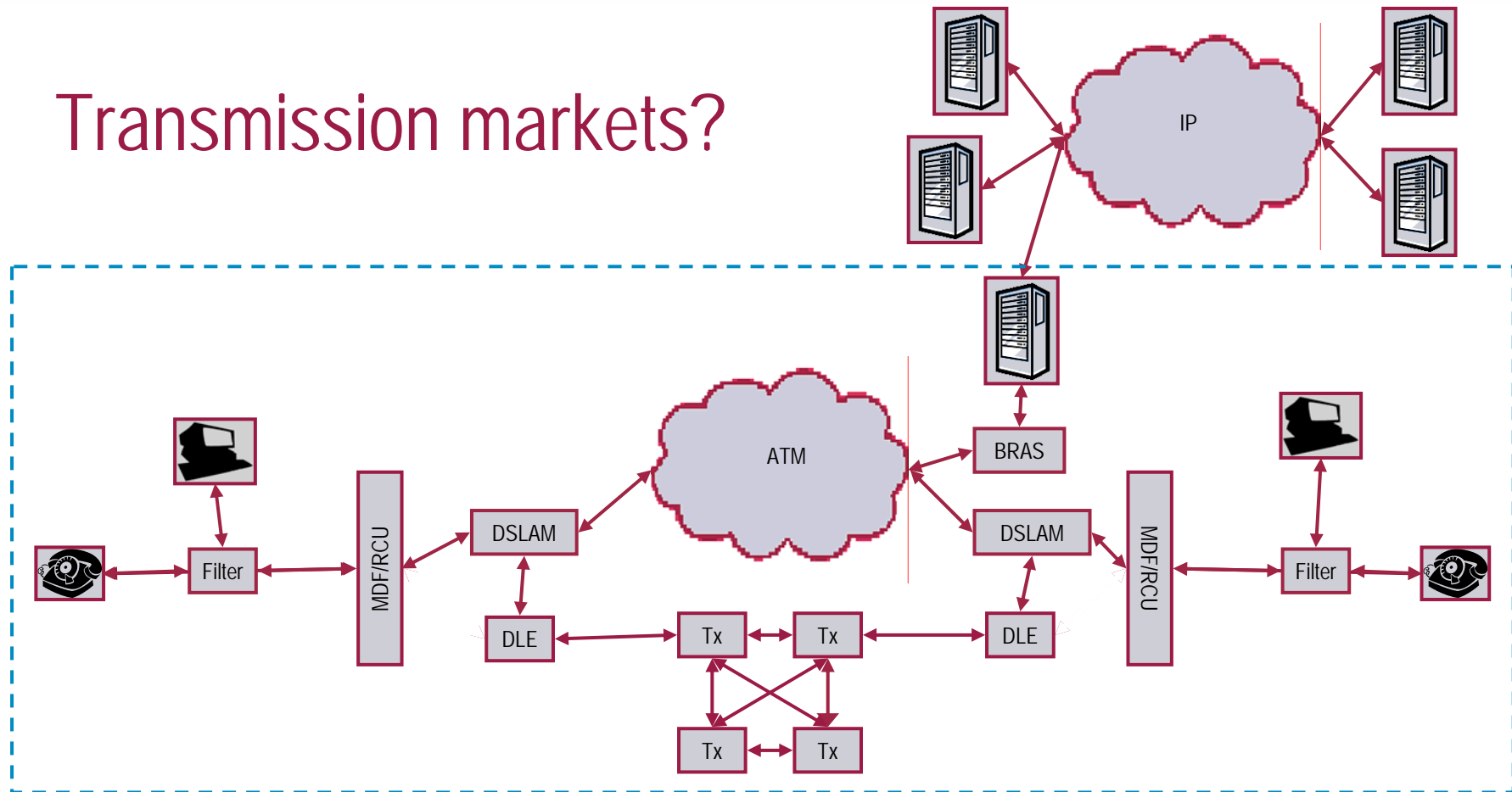
Market power and NGNs

- ◆ Definition of “relevant market”
 - ◆ “network neutrality”
 - ◆ “technologically neutral”
 - ◆ smaller the market defined to be, more likely to identify operators with market power
 - ◆ European Commission Recommendation 2003/311/EC
 - ◆ remedies

Transmission markets?

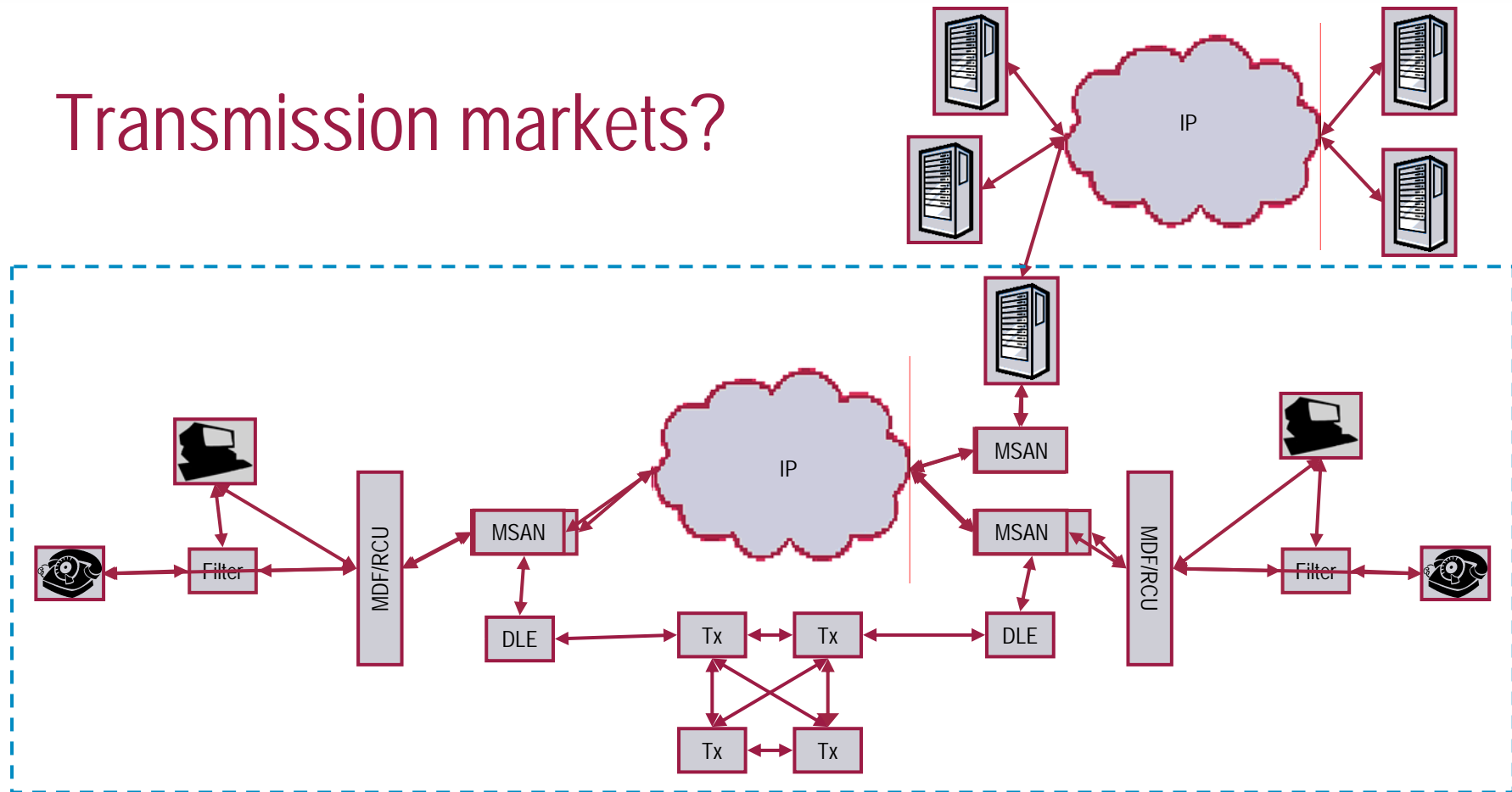


Transmission markets?



- ◆ Broadband over a PSTN
 - ◆ local loop access via DSL
 - ◆ PSTN, ATM and IP networks

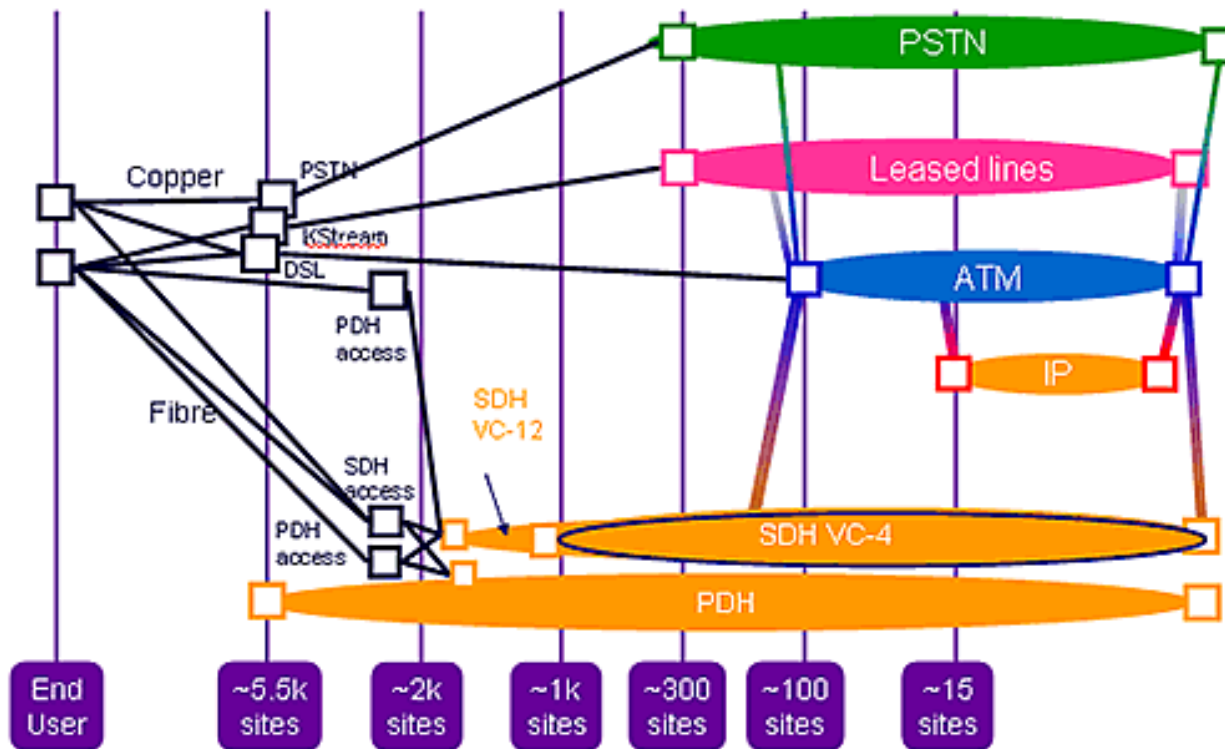
Transmission markets?



- ◆ Migration to IP Networks
 - ◆ replace PSTN and ATM networks
 - ◆ all terminal devices operate on IP

Transmission markets?

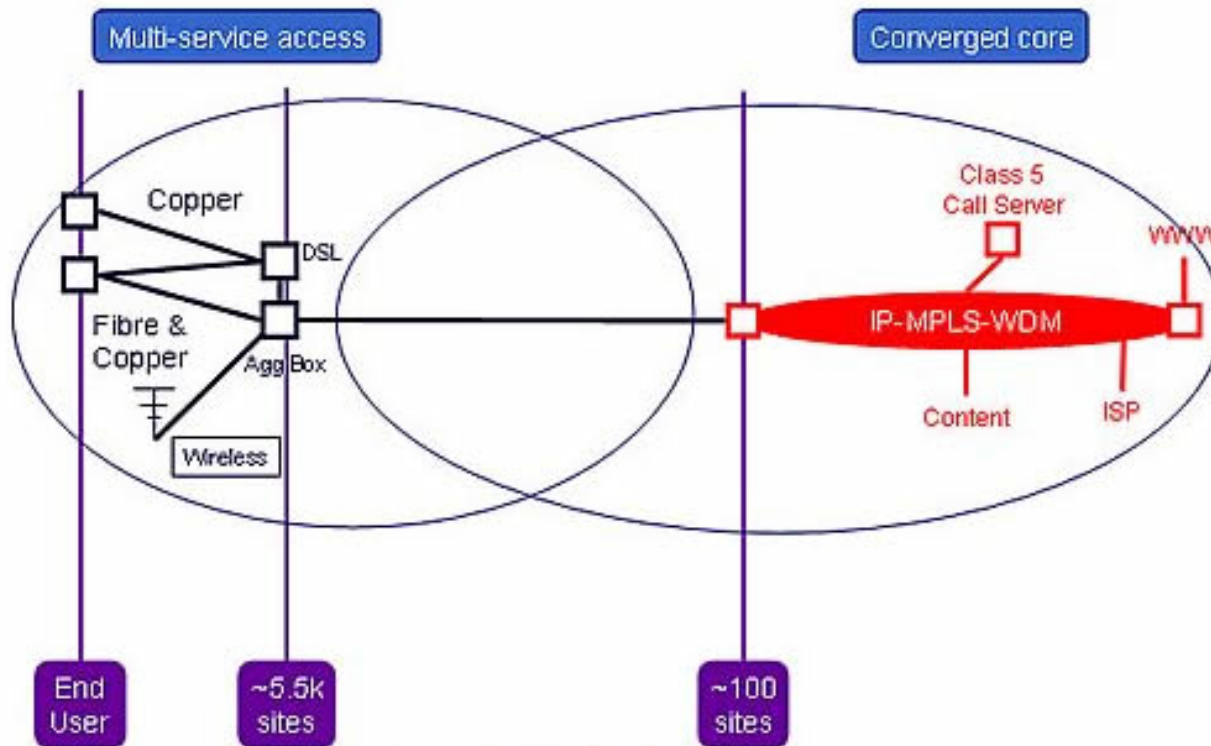
21CN - our current UK network



- ◆ BT plc migration from multiple transport networks to one IP NGN

Transmission markets?

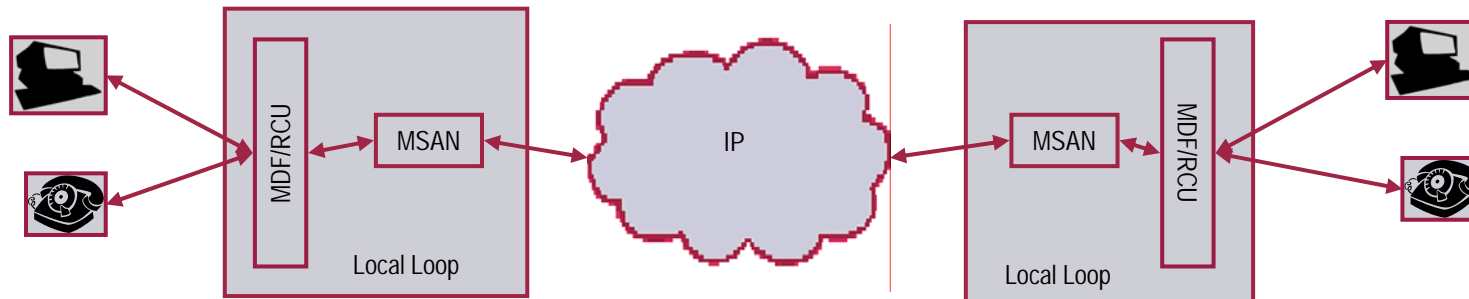
21CN - our simplified UK network



Current thinking. No implementation assurances

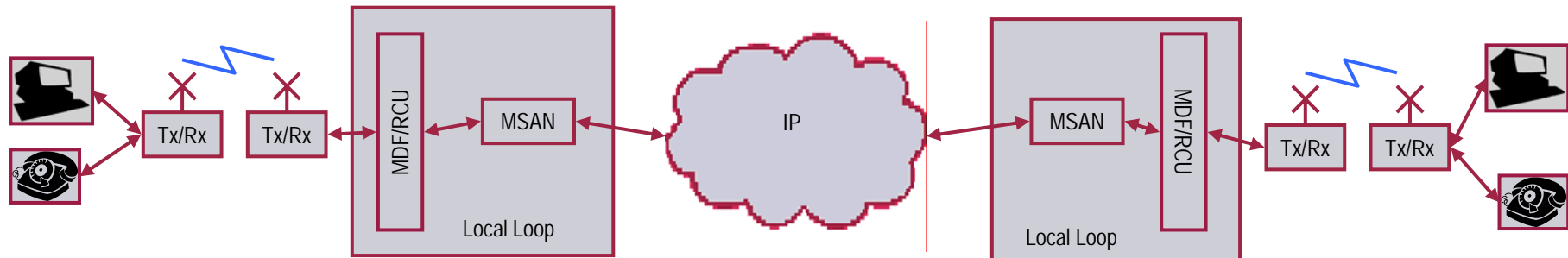
- ◆ BT plc migration from multiple transport networks to one IP NGN

Access markets?



- ◆ Upgraded local loop
 - ◆ passive optical networks (PON) – e.g. Erenis (Paris), Verizon (KSA)?
 - ◆ fibre to the building (FTTB), fibre to the curb (FTTC), fibre to the home (FTTH) – e.g. Free (Paris+), Amsterdam Citynet
 - ◆ vDSL – e.g. Deutsche Telekom
- ◆ “Regulatory holidays”

Access markets?



- ◆ Wireless local loop/fixed wireless access
 - ◆ WiMAX mesh (5.8 GHz) – Kalaam/2Connect (Bahrain)?, Batelco/PCCW (KSA)
 - ◆ FWA (3.5 GHz) – MENA/MTC-VB (Bahrain)
- ◆ Not considered to be competition to fibre/vDSL in Europe – different in GCC (lower bandwidths/speed)?



Technology neutrality

- ◆ Free trade agreements
 - ◆ US Free Trade Agreements with Morocco, Jordan, Oman, Bahrain
 - ◆ EFTA/EU agreements with Jordan and Lebanon
 - ◆ For example, Bahrain-US Free Trade Agreement:
“ARTICLE 12.14: FLEXIBILITY IN THE CHOICE OF TECHNOLOGIES
Neither Party may prevent suppliers of public telecommunications services from having the flexibility to choose the technologies that they use to supply their services, including commercial mobile wireless services, subject to requirements necessary to satisfy legitimate public policy interests.”



Bundling and Tying

- ◆ Triple play/quadruple play
 - ◆ voice, broadband/Internet access, IPTV, mobile (3G, GSM, WiFi), video on demand
- ◆ Competition/regulatory issue?
 - ◆ regulation of retail tariffs -v- wholesale price control
 - ◆ uncertain markets
 - ◆ substitutability?
 - ◆ cross-elasticity?
 - ◆ consumer behaviour?



Regulated NGN Tariffs

- ◆ Ramsey-Boiteux pricing?
 - ◆ setting tariffs, rational monopolistic behaviour would dictate that the price mark up should be inversely proportional to the elasticity of demand – Ramsay pricing
 - ◆ the more elastic the demand (more alternatives), more likely consumers would be to switch – therefore small mark up
 - ◆ for a basket of services, the price mark up is smaller than the inverse of elasticity of demand as this is multiplied by a constant less than 1 – Ramsay pricing as adapted by Boiteux

Regulated NGN Tariffs

- ◆ Ramsey-Boiteux pricing – easy to apply?

- ◆ Total revenue:
$$R(\mathbf{p}, \mathbf{z}) = \sum_n p_n z_n(p_n)$$

- ◆ Total surplus:
$$W(\mathbf{p}, \mathbf{z}) = \sum_n \left(\int_0^{z_n(p_n)} p_n(z) dz \right) - C(\mathbf{z})$$

- ◆ Elasticity:
$$\varepsilon_n = \frac{\partial z_n}{\partial p_n} \frac{p_n}{z_n}$$

- ◆ See http://en.wikipedia.org/wiki/Ramsey_pricing



Regulated NGN Tariffs

- ◆ No international precedent
- ◆ Regulators appear to be favouring “equivalence of access”
 - ◆ “soft” *ex ante* regulation
 - ◆ threat of *ex post* competition law intervention
 - ◆ GCC/MENA regulators able to rely on competition law remedies?



CHARLES RUSSELL

Andrew Sharpe

Tel: +44 20 7203 5194

Mobile: +44 77 1307 9516

Email: andrew.sharpe@charlesrussell.co.uk

تشارلز راسل (مكتب محاماة ذو مسؤولية محدودة) هو مكتب محاماة مسجل في إنجلترا وويلز، رقم السجل أوه سي 311850، ويتولى الإشراف عليه جمعية الحقوق. تتوفر مجموعة من الموظفين في مقر الشركة الرئيسي الكائن في 8-10 نيو فيتر لين، لندن إي سي 4 ايه 1 آر اس. تكون أية إشارة إلى الشريك فيما يتعلق بتشارلز راسل (مكتب محاماة ذو مسؤولية محدودة) إشارة إلى أحد موظفي تشارلز راسل (مكتب محاماة ذو مسؤولية محدودة). تجدر الإشارة إلى أن تشارلز راسل (مكتب محاماة ذو مسؤولية محدودة) هو عضو في جمعية المحامين الأوروبيين والجمعية الدولية للمحامين.

CHARLES RUSSELL

