# **LLU in the UK**

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## Local Loop Unbundling in the UK

- What is LLU
- DLEs
- LLU Operators
- LLU Penetration
- LLU (un)economics
- OpenLLU
- Broadband competition
- Wireless
- Future





#### What is LLU

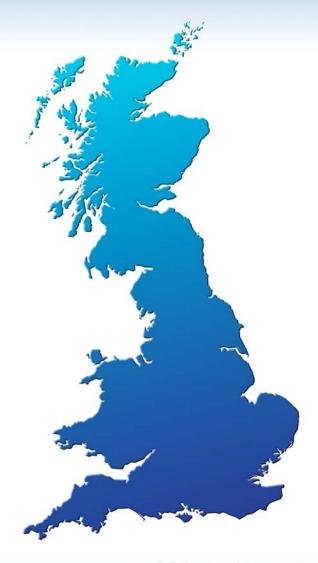
- The ability to put equipment in BT exchange (DLE) and take over the copper line.
- Two forms known as Option 2 or 4
- Option 4
  - Operator partially takes over line and offers broadband only
  - BT retains control of voice
  - BT STILL send out "Blue Bill"
- Option 2
  - Operator completely takes over line for both broadband and voice
  - No BT bill
- Operator then needs to backhual from DLE to their own network
  - Can use BES or own services





#### **DLEs**

- Approx 5600 across UK
- Maybe 1200 in densely populated areas
- Another 600 heavily populated areas
- Many in rural areas







### **LLU Operators**

- AOL (UK) Ltd CPW
- Be Unlimited O2
- Bulldog Communications Ltd Users to Pipex, LLU C&W
- Cable and Wireless Ltd
- Computacenter PLC
- Easynet Sky
- Eaton Power Solutions
- eXstream Networks Ltd
- Groestar Ltd
- Kingston Communications (Hull) Plc
- Lancaster University
- Leanwood Communications Limited
- Lumison
- Nestor Electronics Ltd





### **LLU Operators**

- Opal Telecom (CPW)
- Pipemedia Ltd
- Pipex Internet Ltd who knows up for sale
- Tiscali
- T-Mobile
- UKBB
- Unisys Ltd
- Updata Infrastructure UK Ltd
- Videonetworks Ltd Tiscali
- Wanadoo
- WB-Internet Ltd
- Zen Internet Limited





#### **LLU Penetration**

- All large operators going to around 1000 DLEs
- Operators targeting same DLEs
  - Probably greater than 80% overlap
- BT delaying installs due to DLE overcrowding
  - Have to build new hostel space





### LLU (un) Economics

- Economics have improved since Ofcom first announced LLU plans
  - Initially Ofcom relied on BT to set pricing models
- BT Openreach set-up to ensure fairer access to network
  - BT were threatened with being split
- BT Wholesale forced not to reduce pricing
  - Until 1,500,000 unbunded lines or Apr 1st 2007 (whichever comes first)
- In Dec 2006 there were 1,000,000 unbundled lines
  - No distinction between Option 2 or 4
  - BT Wholesale had around 8.5m broadband customers





### LLU (un) Economics

- 1,000,000 lines 1,000 DLEs
  - Assuming an even spread (it's not)
    - 1,000 lines per DLE
  - Assuming an even spread of operator penetration (it's not)
    - O Around 100 to 200 lines per exchange
- LLU only works for massive scale
- As soon as BT Wholesale reduce their pricing (they will)
  - Economics just get worse
- Further consolidation will occur
  - Pipex up for sale





### **OpenLLU**

- LLU operators should have joined forces
- Single neutral network, operators compete on service
- There would have been a 2nd 21CN to compete with BT on their own terms
- Scale would have meant reach to nearly all DLEs
- Competition is so fierce between telcos it will never happen





### **Broadband competition**

- BT biggest player by far
  - Will try to dominate market and make other operators resellers again with launch of 21CN
  - Operators are underestimating BT's 21CN
- Virgin Media have little money for expansion of network
  - Are likely to use LLU in future
  - Dec 2006 4m customers





#### Wireless

- Wireless is big hope
- Lack of spectrum in UK
  - Pipex Wireless have national 3.5/3.6GHz license
  - PCCW (UK Broadband) have national 3.4GHz licenses (now consolidated to single national license)
  - Neither currently allow for mobility (only fixed links)
- 2.5GHz is up for auction this year
  - BT expected to bid
  - 3G operators also interested





#### **Future**

- Content is key
- Sky/Virgin Media debacle
  - Ofcom etc may intervene
  - Virgin meanwhile lose huge amounts of customers
- **o** BT 21CN
  - They want to be the Sky of fixed networks
  - Utilise BT's systems or no QoS etc.
- The future's still bright (for BT)





#### Thank you for listening!

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