Beyond Triple Play

… the path to Convergence

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Industry Issues:
The challenges facing operators

Business Issues

- Erosion in voice revenue
- Cable or CLEC Competition in Triple Play
- Emerging ASP's
- Commoditization of Broadband
- Service Innovation

Network Issues

- Bandwidth Limitations in Last Mile
- Legacy Networks – Operational cost structure unsustainable
- Legacy Networks – Capacity Constraints on a cost/bit basis
- Best Effort Network Architecture – incompatible for multimedia services

Requires a fundamental Business Transformation

Triple Play

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Changing user expectations
an opportunity to fill unmet need
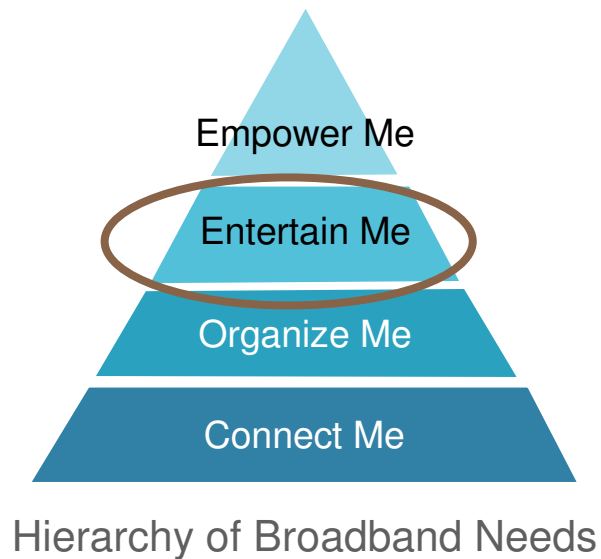
- BASIC Needs:
- Right Content
- Image Quality
- Service Continuity

Empower Me

Entertain Me

Organize Me

Connect Me

Hierarchy of Broadband Needs

- UNMET Needs:
- More Personalized
- More Interactive
- More Access
- More SIMPLICITY

User-Centric
Broadband
Experience

Source: Alcatel focus group research, April 2004

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Triple Play

Project Lightspeed:
A $6B Network & Service Transformation Project

PROJECT LIGHTSPEED
SBC COMPANIES PLAN TO BRING A NEW, IP-BASED, FIBER-RICH NETWORK VIA THE PROJECT LIGHTSPEED INITIATIVE TO 18 MILLION CUSTOMER HOUSEHOLDS.

Integrated Communications and Entertainment Services

- 20-25 Mbps
- Everything IP

IPTV
4 high-quality TV streams, including high-definition TV, and video-on-demand

High-Speed Internet Access

IP Voice
Full-featured offering – growing wireless integration

Financials:

- ~$5B CAPEX over next 3 years
  - Network ($275/home pass) and Premises ($400/sub)
- ~$1B for Service Roll-out
- Free Cash Flow burn ~$7B by 2010

- Top-Line Improvement ~$7B by 2010
- Operational Cost Savings ~$300M/year

Triple Play

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Project Lightspeed:
A $6B Network & Service Transformation Project

Strategy:

- Select markets and customers approach
- Focus on delivering a differentiated video proposition through "Personalization"

Roll-out

- Reach 18M customers by 2007 (17M FTTN, 1M FTTP)
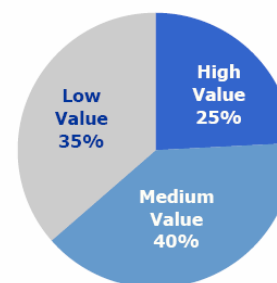- By 2010 pass 50% of consumer lines

Target Customers

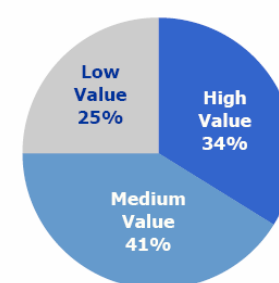- Focus on High Value Customers (90% by 2007)

Target Subscribers

- Target 5M subscribers through Project Lightspeed by 2010
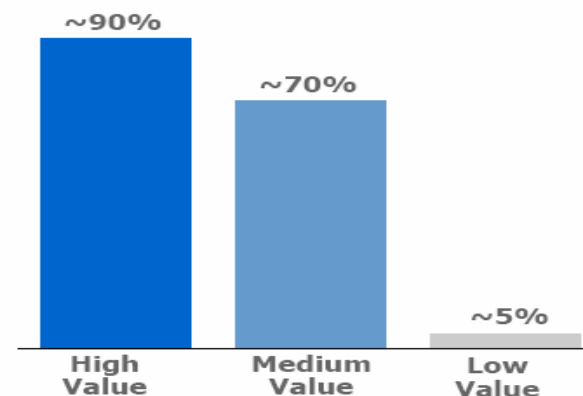- Target video subscribers 3.6M (~25%)

High-Value Customers

Total Customer Household Segmentation

- Low Value 35%
- High Value 25%
- Medium Value 40%

% of Customer $ Spend Attributed to Each Segment

- Low Value 25%
- High Value 34%
- Medium Value 41%

Percent of Each Segment Covered by Project Lightspeed

- High Value ~90%
- Medium Value ~70%
- Low Value ~5%

Triple Play

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Project Lightspeed:
A $6B Network & Service Transformation Project

Drive Fiber deep into the last mile

- Full IP network from end-to-end
- FTTN 20Mbs; FTTP 39Mbs
- Manage services through a Routed Home Gateway

Core and Aggregation Network

- Ethernet Aggregation (VPLS)
- Service Routing on a per-sub basis
- R-OADM for optical transport

Video Distribution

- National Head-End (2 Master)
- Regional Head-End (40)
  - Local channels, commercials, etc.
- Local Video Office (140)
  - Collection of video streams ready per demand
- Compression:
  - WMP 9 or MPEG 4
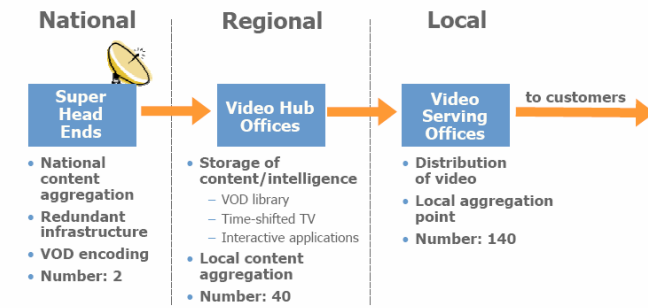

Network Alternatives

Fiber to the RT (Pronto)

Central Hub — Fiber — Remote Terminal — Copper — Node — Copper — Today 1.5 - 6.0 Mbps

Fiber to within 6,000 feet of home on average; 12,000 feet maximum

Fiber to the Node (FTTN)

Central Hub — Fiber — Node — Copper — Overbuild 20 - 25 Mbps

Fiber to within 3,000 feet of home on average; 5,000 feet maximum

Fiber to the Premise (FTTP)

Central Hub — Fiber — New Build Up to 39 Mbps

Fiber from the central office to the home

Project Lightspeed Video Network Architecture

National	Regional	Local
Super Head Ends	Video Hub Offices	Video Serving Offices → to customers
• National content aggregation	• Storage of content/intelligence	• Distribution of video
• Redundant infrastructure	– VOD library	• Local aggregation point
• VOD encoding	– Time-shifted TV	• Number: 140
• Number: 2	– Interactive applications	
	• Local content aggregation	
	• Number: 40	

SBC Investor Update   20

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Project Lightspeed:
A $6B Network & Service Transformation Project

Alcatel awarded primary supplier role in Project Lightspeed worth $1.7B

1) Network infrastructure

- IP routing: 7750 SR
- Ethernet switching: 7450 ESS
- Deep fiber access: 7330 FTTN & 7340 FTTU

2) Video service integrator

- IPTV Head end, middleware, content management, conditional access and DRM, home networking and STBs

3) Network system integrator

- Network design, traffic modeling, resiliency, performance metrics , component interoperability, integration of management systems.

SBC   Alcatel's Role   **ALCATEL**

- A Partner, not a Supplier
- Joint development of requirements and roadmap
- Joint testing in labs and field
- Joint management of 3rd party solution components
- Joint Program Management and Governance structure

11/04/2004   Page 2   SBC Proprietary & Confidential   Project Lightspeed

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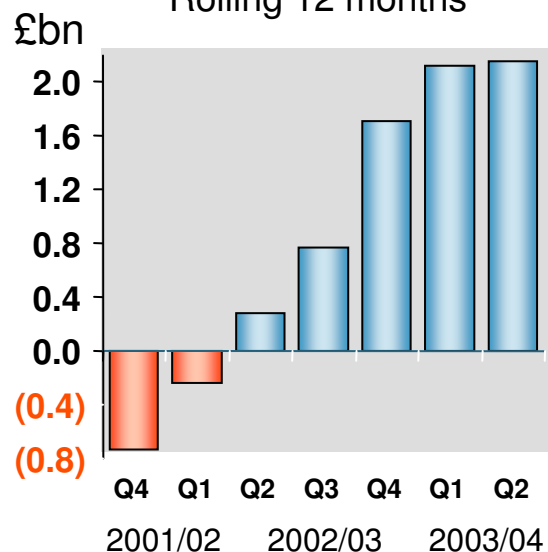# Project 21CN: A finite window of opportunity $19B Business Transformation

"We decided that the only way to survive is to be aggressive and innovative, and we have had to commit our strategy and investments" into the 21CN…"
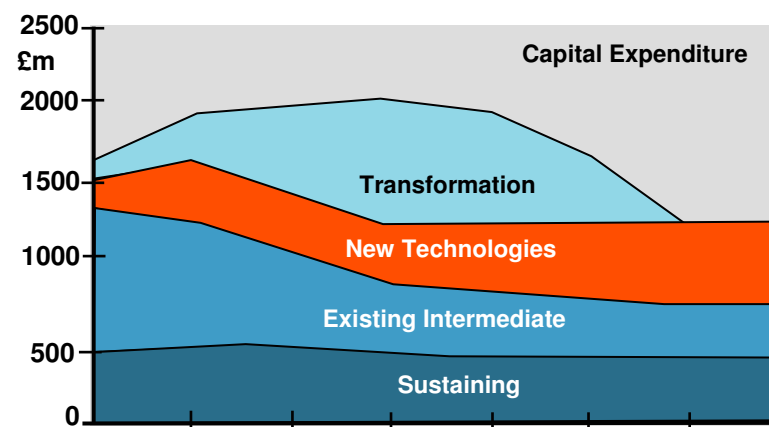
BT CEO, Paul Reynolds)

The Means but not for long….

Free cash flow (before dividend) **
Rolling 12 months

£bn

| Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| 2001/02 | | 2002/03 | | | 2003/04 | |

Fundamental restructuring of their cost basis
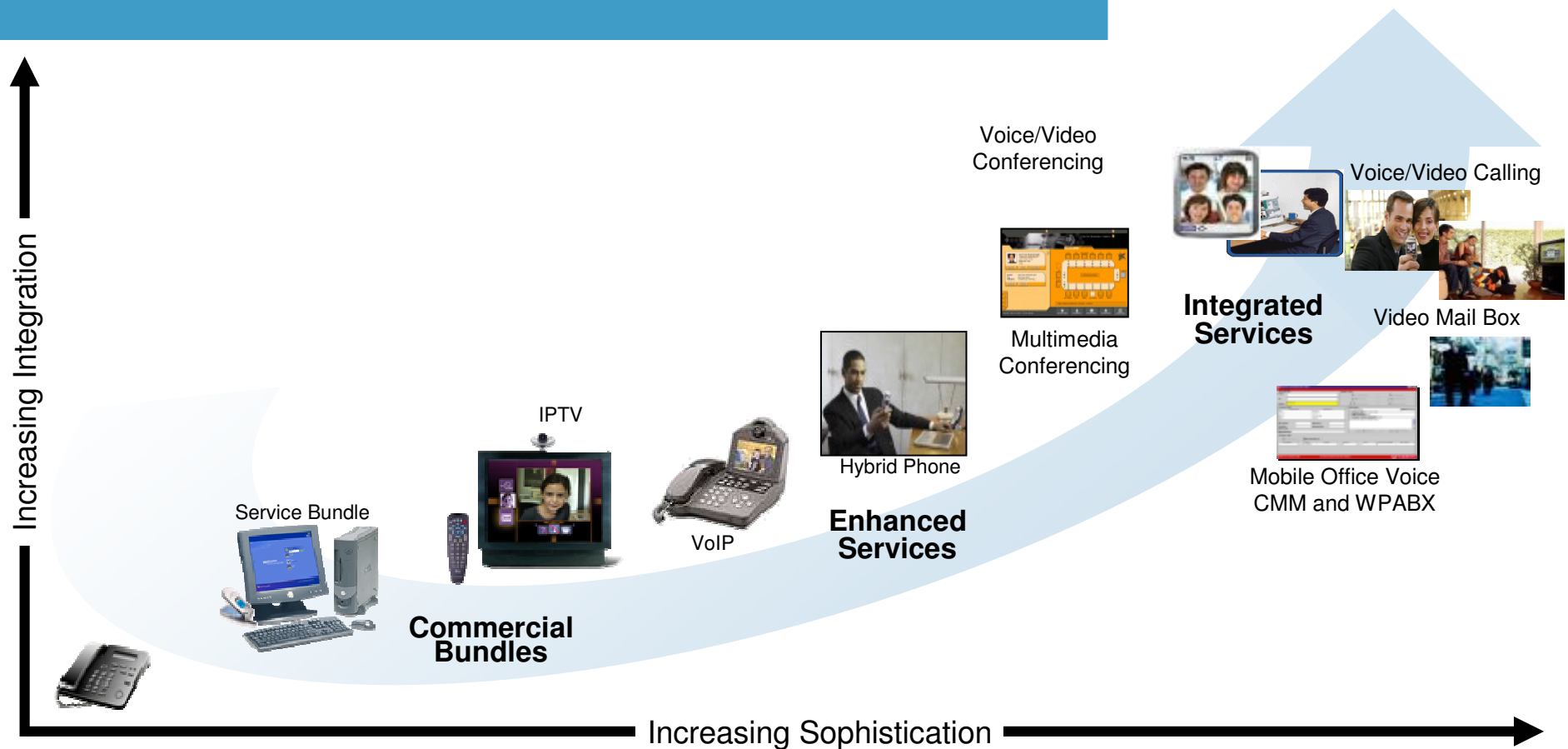
Investing now for future cash savings of £bn

- Will contribute to existing cash cost savings in Retail and Wholesale up to 2004/05
- Beyond 2004/05, aim to find incremental cash cost efficiencies of £200-300m pa resulting in c £1bn beyond 2008/09
- In addition, other non-network efficiencies will continue to be made throughout the group

21st Century Network All within the £3bn pa capex envelope
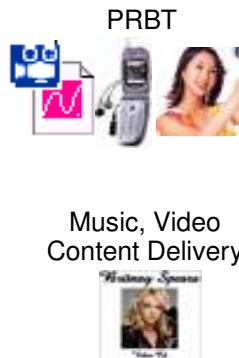
Triple Play

Deliver a Roadmap for New Services

Increasing Integration

Service Bundle

Commercial Bundles

IPTV

VoIP

Hybrid Phone

Enhanced Services

Voice/Video Conferencing

Multimedia Conferencing

Integrated Services

Voice/Video Calling

Video Mail Box

Mobile Office Voice CMM and WPABX

Increasing Sophistication

New Services are Powered by IP Transformation

Triple Play

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Innovative Pre-Integrated Hybrid and Multimedia Services

Consumer Applications

Corporate Applications

MUSIC

VIDEO

PRBT

Music, Video Content Delivery

Voice/Video Calling

PoC

IPTV

Video Mail Box

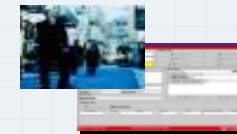Video MMS

Guardian/Blog

Mobile TV

Multi-Access Mobility

One Phone UMA andIMR

Mobile Office Voice CMM and WPABX

Mobile Office Data Email, PIM, Intranet
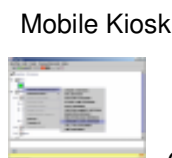
Voice and Video Conferencing
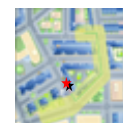
Multimedia Conferencing

Payment and Common Capabilities

Real-Time Payment

Mobile Kiosk

Presence

Announcement Machine

Advanced Flexible Rating

Content Value Charging
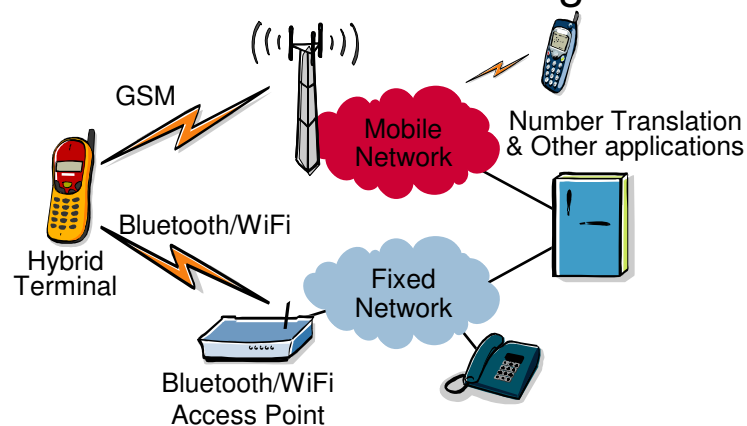
Location

User Profile

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Proof Point: Service Integration for Converged Applications

Tackle the threat of F-M substitution

BT Fusion

Alcatel as end-to-end integrator

GSM

Number Translation & Other applications

Mobile Network

Bluetooth/WiFi

Hybrid Terminal

Fixed Network

Bluetooth/WiFi Access Point

The best of both worlds

BT Fusion

- BT landline rates when you are at home or office

- Competitive mobile bundled minutes when you are out and about

- Free BT Fusion Motorola v560 phone

  - Stylish, compact flip phone design with large, vivid colour display with video and camera

- Free BT Hub to wireless network your home

BT

Commercial roll-out started Sep-05
Currently 13,000 residential users
2,000 new connections per week
BT now also targets corporate users

Source: LightReading, 9-Feb-06

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Press Center

T-Systems and Alcatel seal strategic partnership at CeBIT

The cell phone as full-feature phone extension line

Frankfurt am Main / Hanover, March 14, 2006

Today, T-Systems and Alcatel signed a strategic alliance at CeBIT. Both companies will jointly develop, implement and market office communications systems. Seamless communication solutions, which connect mobile communication devices with the fixed-line network, are the focus of the cooperation. This will enable users will have the same functions available on their cell phones as on their fixed-line telephones. The first joint solution is ready to hit the market.

T-Systems will offer its customers a system from Alcatel that transforms cell phones into a full-featured fixed-line extension. Cell phones will thus become an integrated part of the private branch exchange system. Employees will have the same cell phone and fixed-line phone number. Users no longer need to manually switch their cell phones from fixed-line to mobile operation mode. The communication system receives incoming calls centrally and transfers them to both the fixed line and cell phone at the same time.

Ulrich Kemp, Head of Sales & Services for Business Services at T-Systems, says: "For the first time ever, Alcatel will be able to achieve seamless communication with its solution. The company is way ahead of its competitors. Together with our operating model, this enables us to be ready for the market very quickly. We're able to offer a complete solution, including services and optimal customer care at a reasonable price."

www.t-systems.com

Next Step

▶ Press and Public Relations

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