THE **OPLAN** FOUNDATION

www.oplan.org

Open **P**ublic **L**ocal **A**ccess **N**etworks (**OPLAN**)

The Benefit to Communities

Munich, Germany : 26th - 27th February 2007

Malcolm Matson

malcolm.matson@oplan.org

THE **OPLAN** FOUNDATION

opening minds to open networks

77 Andrewes House : London EC2Y 8AY : United Kingdom   Tel: +44 230-7638 2344

MÜNCHNER KREIS

THE **OPLAN** FOUNDATION

opening minds to open networks

… an international not-for-profit educational foundation and 'think-tank' founded in 2004 by Malcolm Matson

OBJECTS

"…. to advance the education of the public about all aspects relating to digital technologies and their social and economic benefits particularly as deployed in an open public local access network (OPLAN)"

www.oplan.org

3 STRATEGIES

- **a meta-community and resource for OPLANs** *actual/aspiring*

- **unequivocal advocacy & education** *'opening minds to open networks'*

- **provide support and seed funding for OPLANs in developing world** *'watering the grass routers'*

THE **OPLAN** FOUNDATION

THE **OPLAN** FOUNDATION

opening minds to open networks

September 2005 – appointed to advise The World Bank on open public local access networks (OPLANs) and in particular, their deployment in the developing world. Report *available at*

www.oplan.org

Register as an individual, organisation or network

THE **OPLAN** FOUNDATION

So what is an OPLAN?

Open Public Local Access Network

- is a network of truly 'broadband' capacity - i.e. where the bandwidth capacity is dictated by nothing other than physical characteristics of the deployed technologies (neutral)

- dedicated to serving a local geographic community - ranging from a street or business park to an entire town or city

- provides abundant low cost access to connectivity on an 'end-to-end' and symmetrical basis throughout that community

- is a 'public utility' in that it is available for use by any party located within the community it serves: public and private, business and residential

- affords global internet access through competing third-party carriers/service providers

- does not differentiate between 'content creators' and 'content consumers' and their *'bits'*

- provides infrastructure which is open to all and is owned and controlled independently of any service or content which uses it

- is structured, financially and legally, and configured with management and governance measures which serve the 'common good' and assures the primary short and long term 'value and benefit' rests locally with users

- end-user 'access' charges are broadly based on servicing capital and maintenance cost-recovery

- is funded by the private sector - not a backdoor to re-nationalisation or state control

THE **OPLAN** FOUNDATION

(OPLAN white paper at www.oplan.org)

So what is an OPLAN?

Open **P**ublic **L**ocal **A**ccess **N**etwork

City-wide

Optical Fibre

Networks in ←――――――――――――――――――――→

Developed

Cities

Rural

Wireless

Networks in

Developing

World

Both are part of the same 'global revolution'

THE **OPLAN** FOUNDATION

(OPLAN white paper at www.oplan.org)

Open Networks - a next step in Human Social Evolution

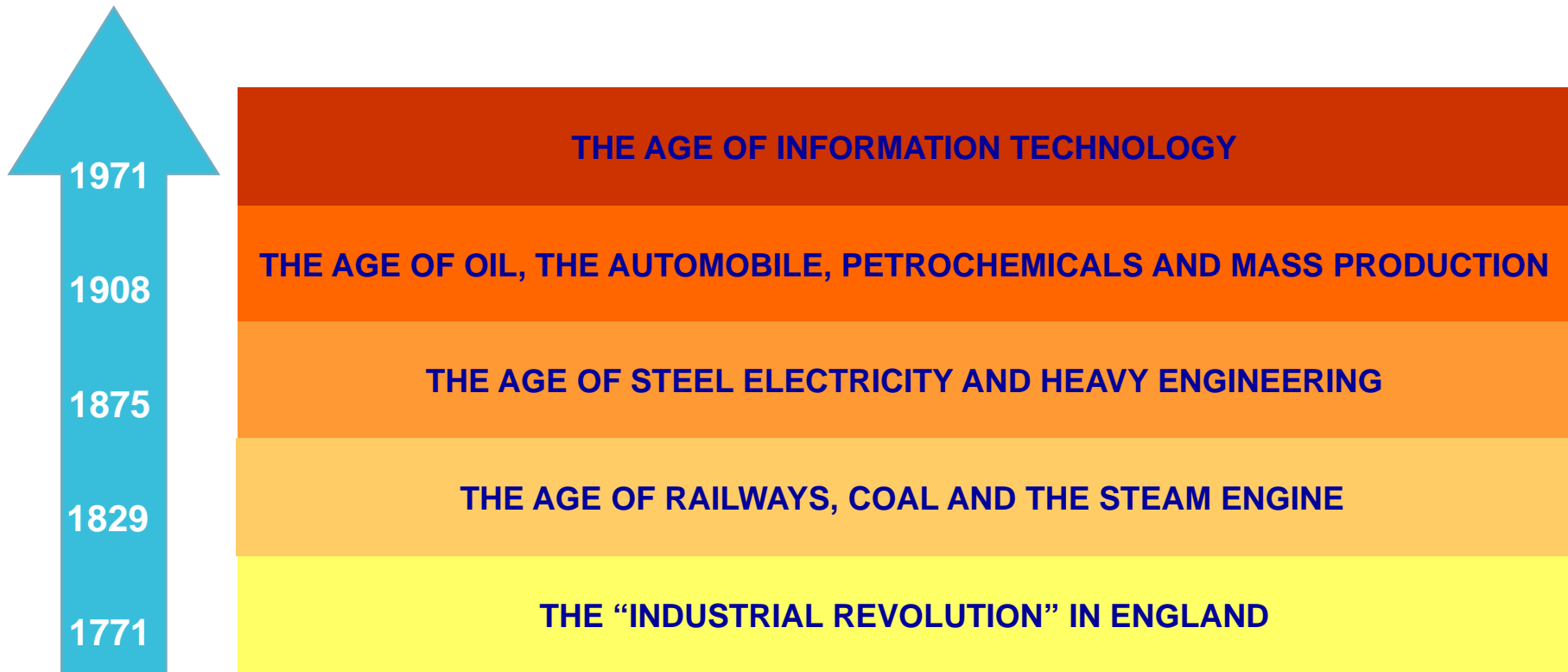- a historical context and perspective gives understanding

- disruptive and abundant digital technologies driving change

- our local economies will prosper using them

- our cities, citizens and societies will flourish with them

- the human spirit and relationships will thrive through them

THE **OPLAN** FOUNDATION

Open Networks - a next step in Human Social Evolution

- a historical context and perspective gives understanding
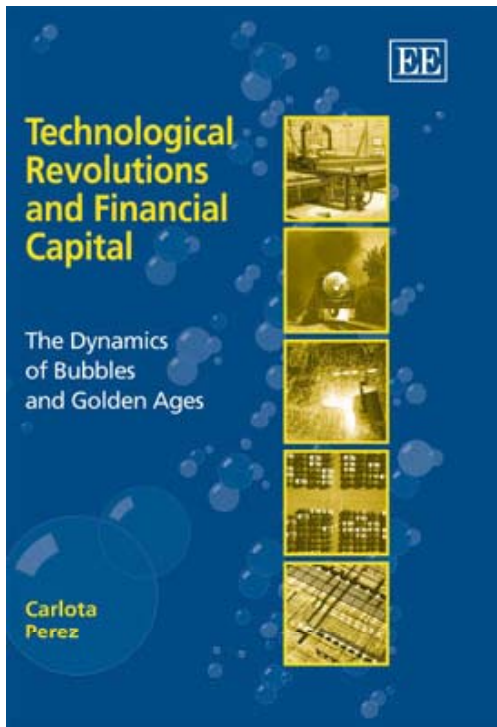
Brilliant economic analysis of previous 'industrial revolutions'
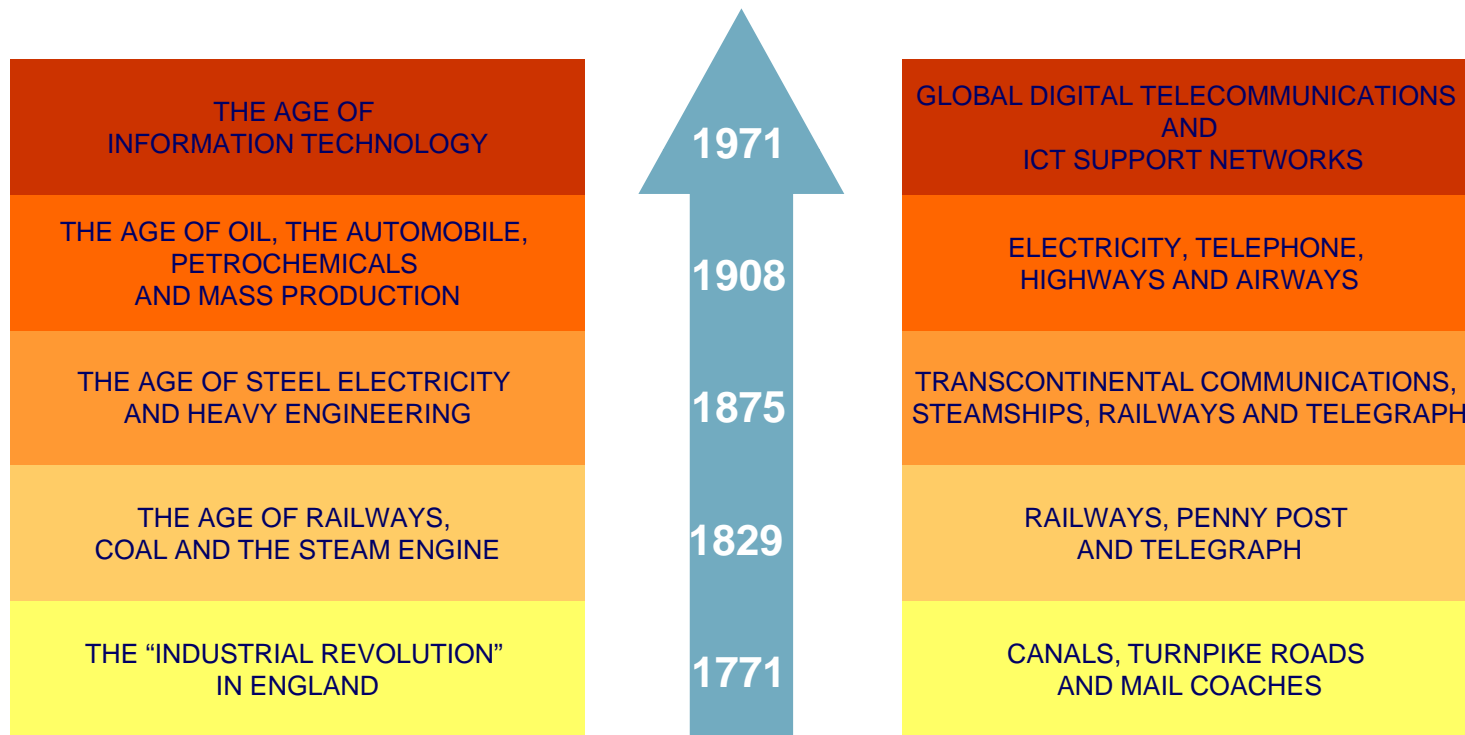
Carlota Pérez

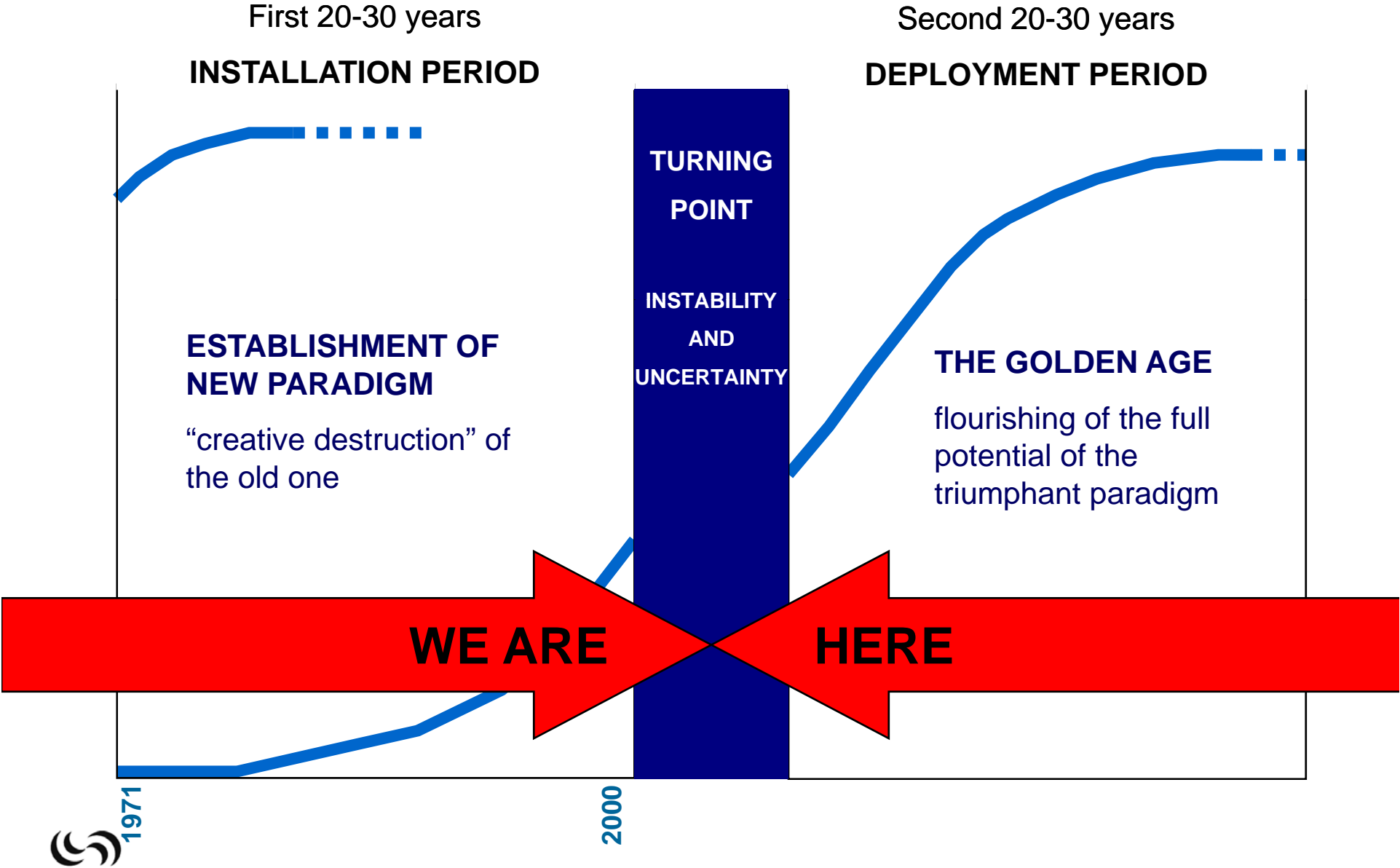# FIVE TECHNOLOGICAL REVOLUTIONS IN 200 YEARS

Carlota Pérez

Year	Revolution
1971	THE AGE OF INFORMATION TECHNOLOGY
1908	THE AGE OF OIL, THE AUTOMOBILE, PETROCHEMICALS AND MASS PRODUCTION
1875	THE AGE OF STEEL ELECTRICITY AND HEAVY ENGINEERING
1829	THE AGE OF RAILWAYS, COAL AND THE STEAM ENGINE
1771	THE "INDUSTRIAL REVOLUTION" IN ENGLAND

THE **OPLAN** FOUNDATION

EACH INDUSTRIAL REVOLUTION IS UNDERPINNED
BY NEW INFRASTRUCTURE

Carlota Pérez

Age	Year	Infrastructure
THE AGE OF INFORMATION TECHNOLOGY	1971	GLOBAL DIGITAL TELECOMMUNICATIONS AND ICT SUPPORT NETWORKS
THE AGE OF OIL, THE AUTOMOBILE, PETROCHEMICALS AND MASS PRODUCTION	1908	ELECTRICITY, TELEPHONE, HIGHWAYS AND AIRWAYS
THE AGE OF STEEL ELECTRICITY AND HEAVY ENGINEERING	1875	TRANSCONTINENTAL COMMUNICATIONS, STEAMSHIPS, RAILWAYS AND TELEGRAPH
THE AGE OF RAILWAYS, COAL AND THE STEAM ENGINE	1829	RAILWAYS, PENNY POST AND TELEGRAPH
THE "INDUSTRIAL REVOLUTION" IN ENGLAND	1771	CANALS, TURNPIKE ROADS AND MAIL COACHES

FORTY TO SIXTY YEARS FROM IRRUPTION TO MATURITY

Carlota Pérez

First 20-30 years

INSTALLATION PERIOD

Second 20-30 years

DEPLOYMENT PERIOD

TURNING POINT

INSTABILITY AND UNCERTAINTY

ESTABLISHMENT OF NEW PARADIGM

"creative destruction" of the old one

THE GOLDEN AGE

flourishing of the full potential of the triumphant paradigm

WE ARE **HERE**

1971

2000

THE **OPLAN** FOUNDATION

1759

…if the French can build the Canal du Midi – why don't I build a canal to carry coal from my coal mines to Manchester where all my mill customers are?

Francis Egerton

3rd Duke of Bridgewater
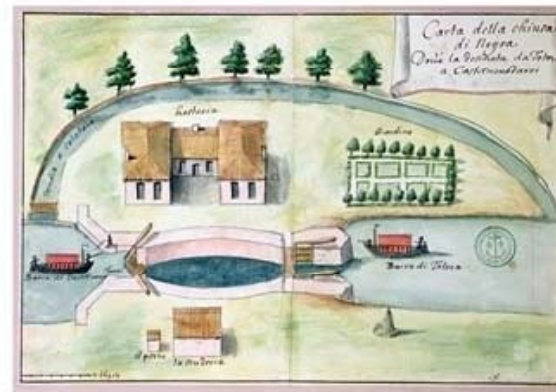
1785 - 1825

4,500 +

miles of canal
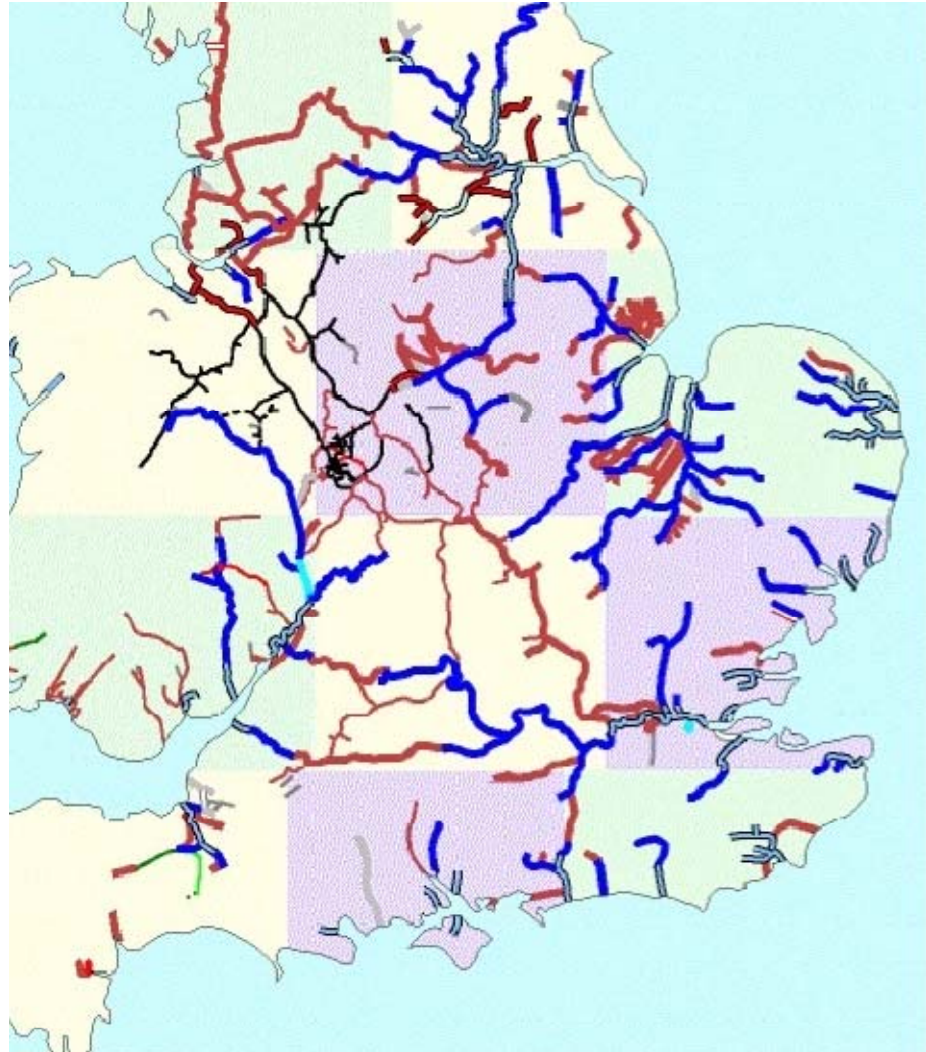
1829
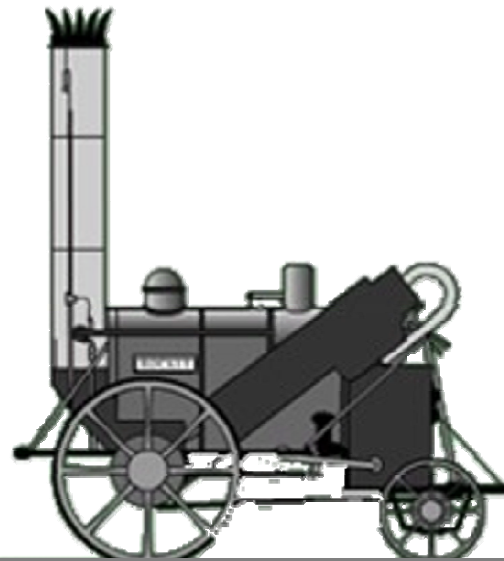
OFCOM

Office of Canal Operations & Management

THE OPLAN FOUNDATION

TOWPATH

TOWPATH

CANAL

OFCOM

Steaming ahead with Britain

Office of Canal
Operatiopns & Management
1829

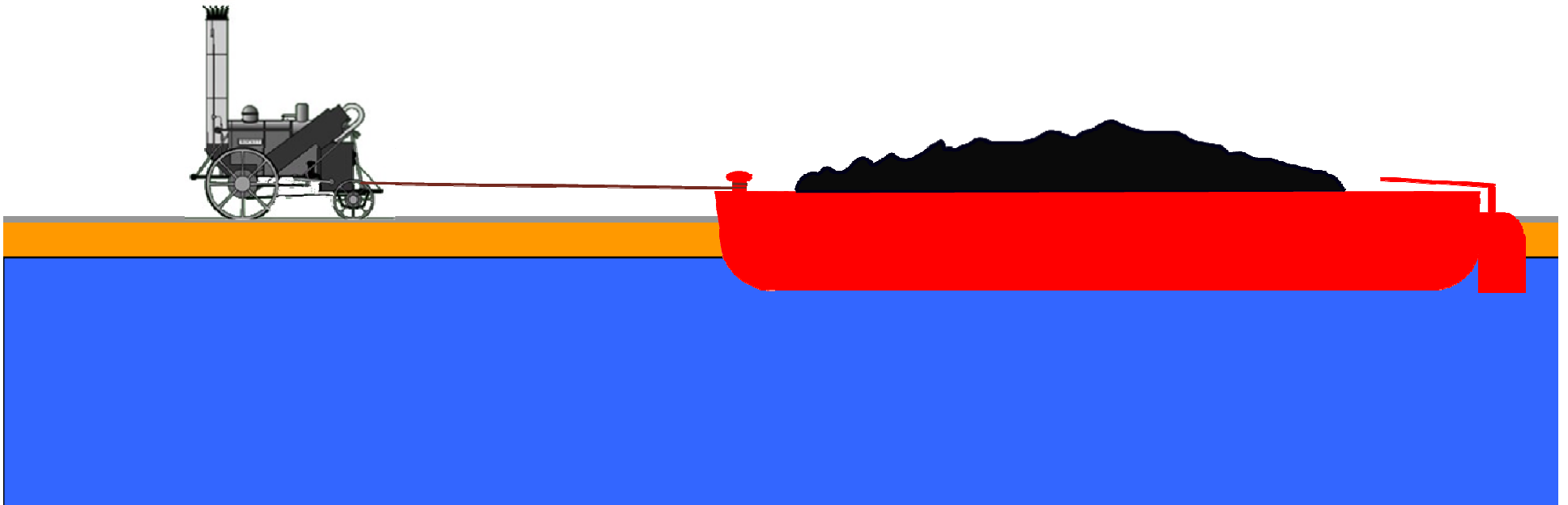# *APPARENT* BENEFITS FOR EVERYONE

- faster movement of coal and other materials

- greater utilization of canal capacity

- minimised public risk through licensed regulatory regime

- birth of a new engine manufacturing industry

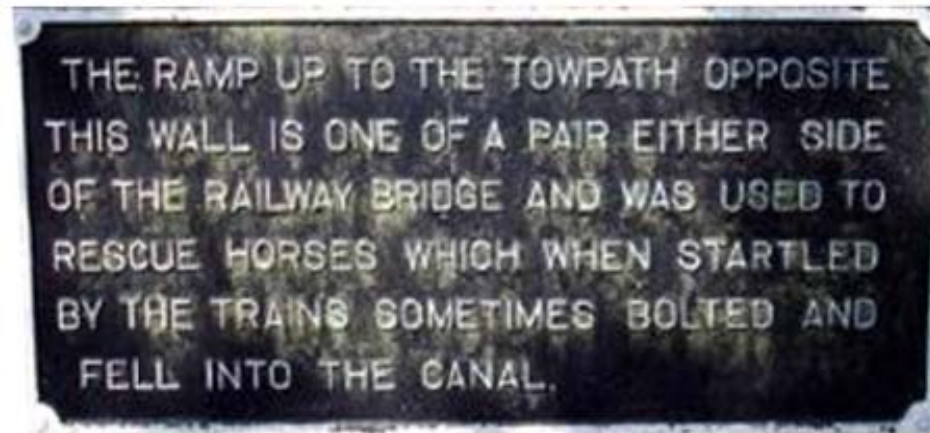- massive growth of steel and rail output

- last but not least … "happy horses"

What actually happened?

THE CANAL INDUSTRY

Declined and died within 20 years

… even the horses were 'disrupted'

THE RAMP UP TO THE TOWPATH OPPOSITE THIS WALL IS ONE OF A PAIR EITHER SIDE OF THE RAILWAY BRIDGE AND WAS USED TO RESCUE HORSES WHICH WHEN STARTLED BY THE TRAINS SOMETIMES BOLTED AND FELL INTO THE CANAL.

…an example of end users in a free market determining the nature and pace of adoption of disruptive 'next genus' technology and thereby delivering a **'GOLDEN AGE'** of economic and social development
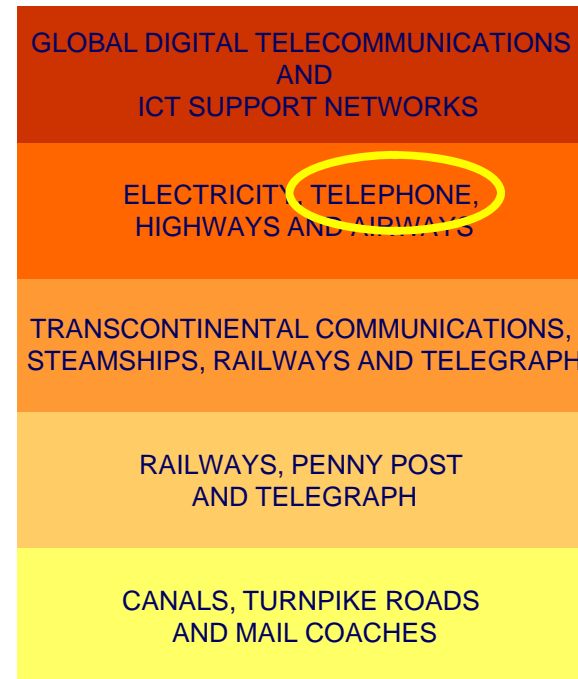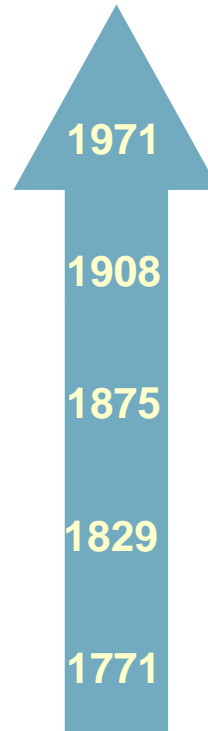
Alexander Graham Bell

- Western Union "owns" the telegraph business

- Bell "invents" the telephone and offers patents to WU for $100,000

- "No thanks – it does not fit with our future plans"

- Bell meets J P Morgan and creates a "new industry" … AT&T

- where is Western Union today?

THE **OPLAN** FOUNDATION

Technological Revolutions

In no previous 'industrial revolution', has the infrastructural network of the 'revolution' that succeeds it, ever been delivered by, or evolved from, those responsible for the infrastructural network of the prevailing age

MATSON

Year	
1971	GLOBAL DIGITAL TELECOMMUNICATIONS AND ICT SUPPORT NETWORKS
1908	ELECTRICITY, TELEPHONE, HIGHWAYS AND AIRWAYS
1875	TRANSCONTINENTAL COMMUNICATIONS, STEAMSHIPS, RAILWAYS AND TELEGRAPH
1829	RAILWAYS, PENNY POST AND TELEGRAPH
1771	CANALS, TURNPIKE ROADS AND MAIL COACHES

PEREZ

SO WHAT IS THE PHILOSOPHICAL, POLITICAL OR ECONOMIC RATIONALE FOR REGULATING TO DO JUST THIS WITH THE CURRENT 'INFORMATION REVOLUTION'?

THE **OPLAN** FOUNDATION

DISRUPTIVE TECHNOLOGY

Does what it says it does !

DISRUPTS!

Substantial incumbent vested interests are dedicated to making 'tomorrow' the same as 'yesterday'

Sector specific Public Policy intervention and Regulation is the tool which these incumbent and vested interests have successfully adopted to help blunt the impact of disruptive technologies and thereby extend their life beyond that which the market would otherwise naturally allow

THE **OPLAN** FOUNDATION

APPARENT BENEFITS FOR EVERYONE

- faster 'download' speeds

- 'always on'

- increased ISP competition

- lower end user costs

- increased usage and household penetration
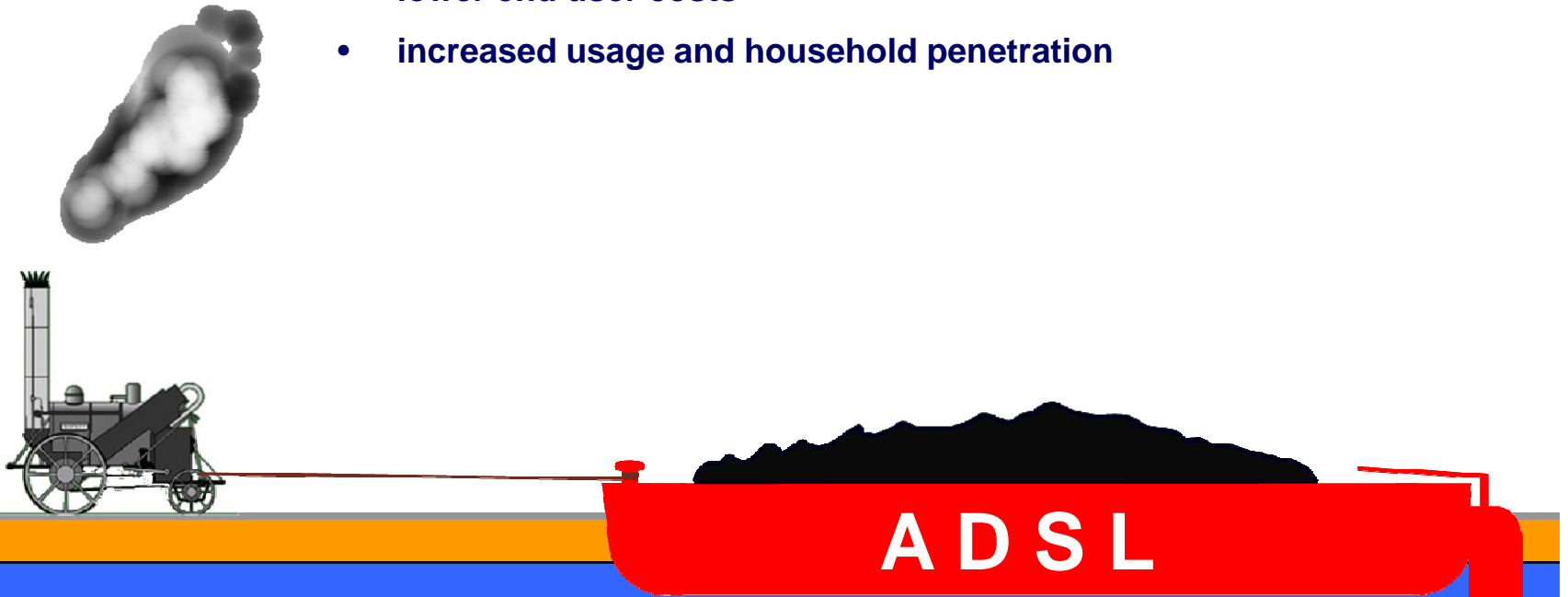
A D S L

ADSL is NOT a 'golden age' creating deployment of digital technologies

Open Networks - a next step in Human Social Evolution

- a historical context and perspective gives understanding

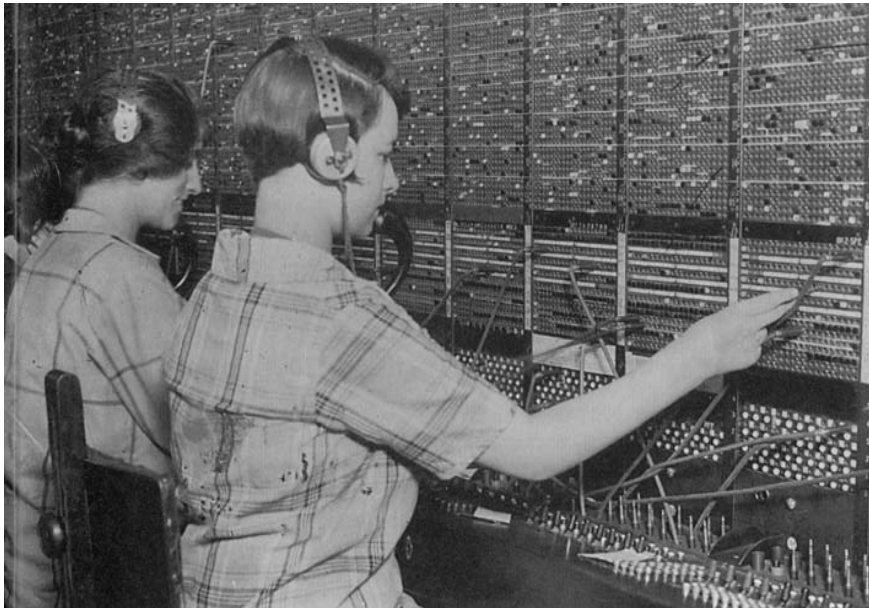- disruptive and abundant digital technologies drive them

PTO LOCAL EXCHANGE

PTO LOCAL EXCHANGE

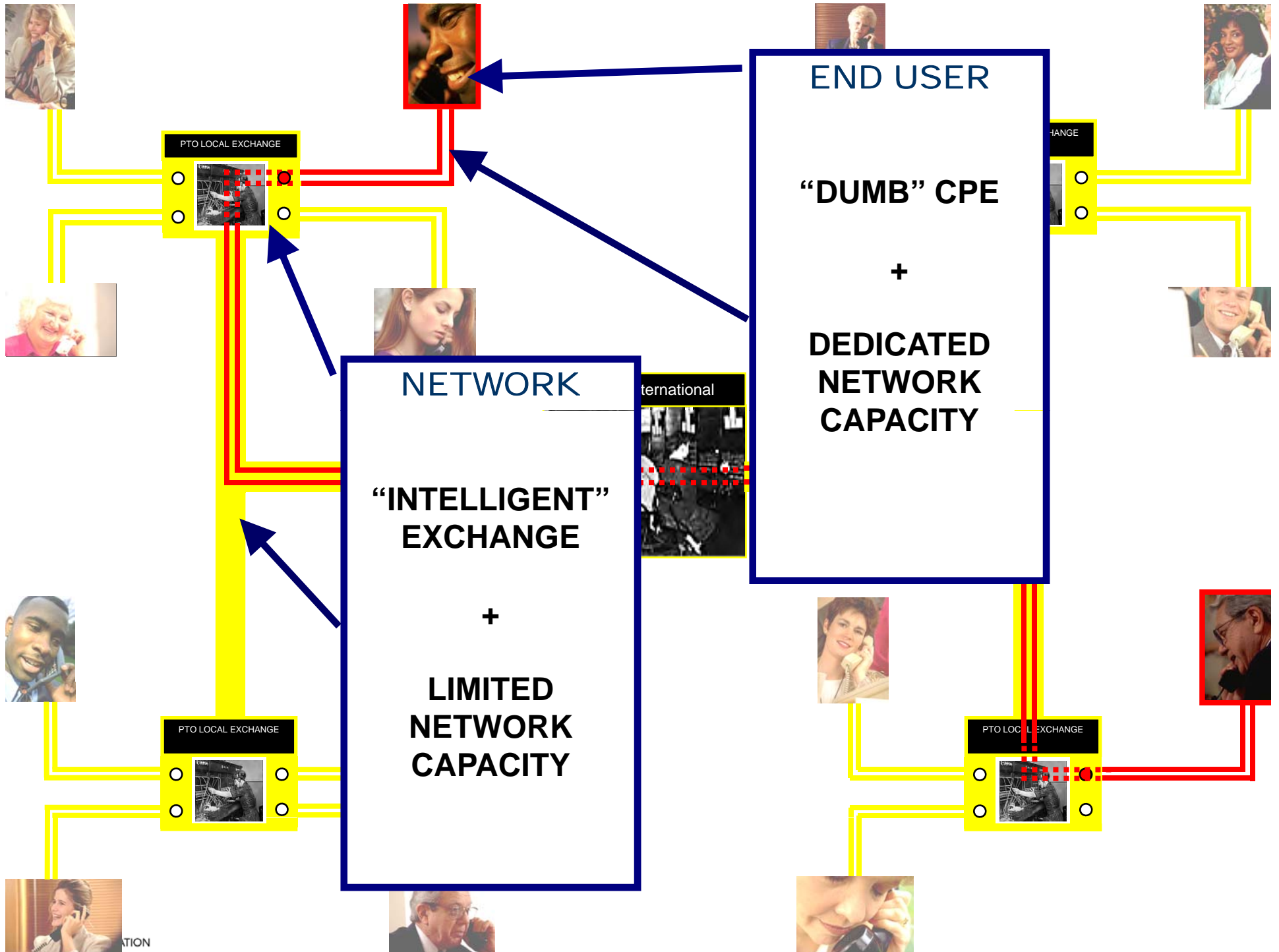PTO LOCAL EXCHANGE

PTO LOCAL EXCHANGE

€
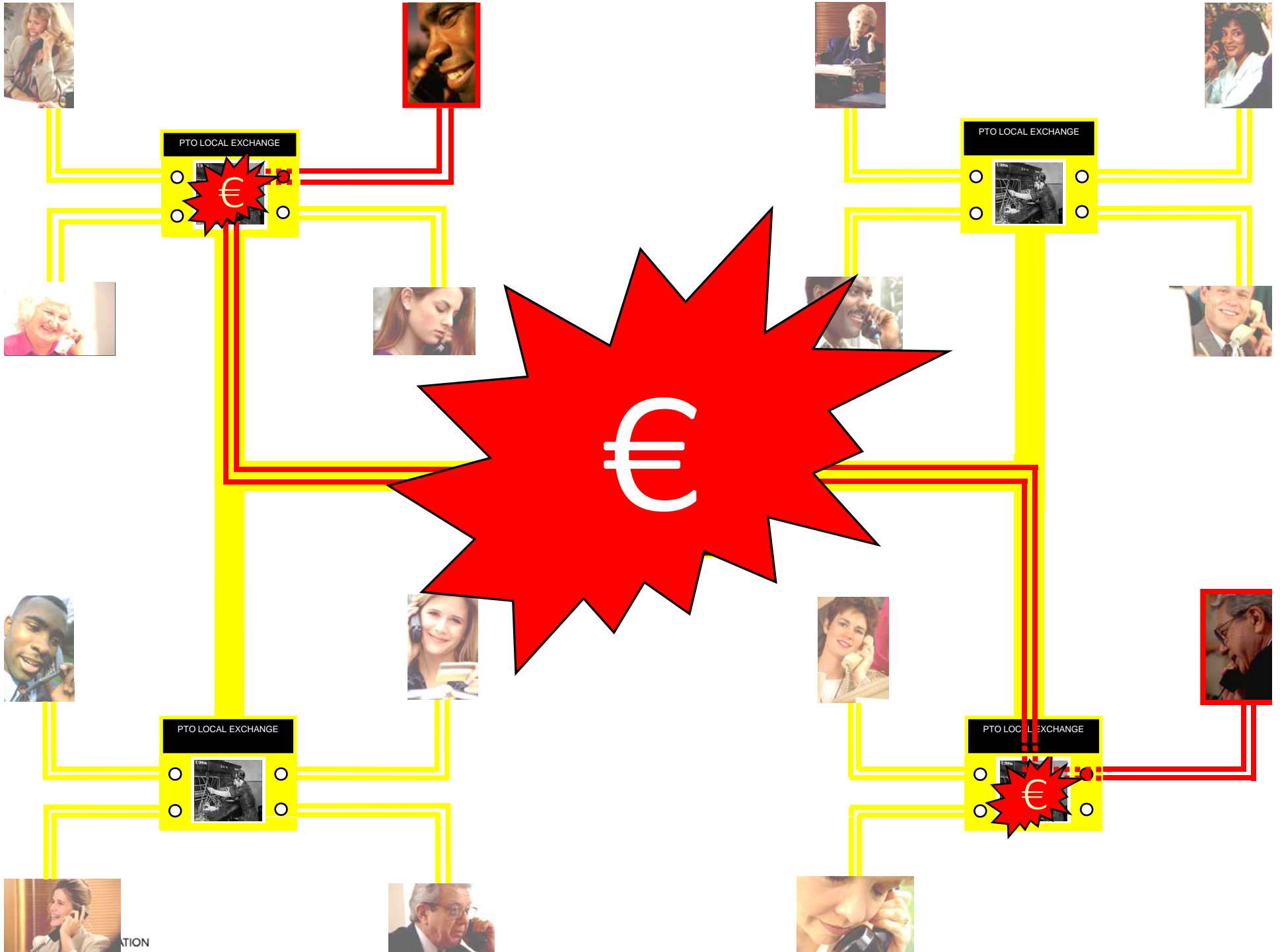
using routing 'intelligence' within the network …

… to allocate 'scarce' trunk network capacity

END USER

"DUMB" CPE

+

DEDICATED NETWORK CAPACITY

NETWORK

"INTELLIGENT" EXCHANGE

+

LIMITED NETWORK CAPACITY

PTO LOCAL EXCHANGE

PTO LOCAL EXCHANGE

PTO LOCAL EXCHANGE

International
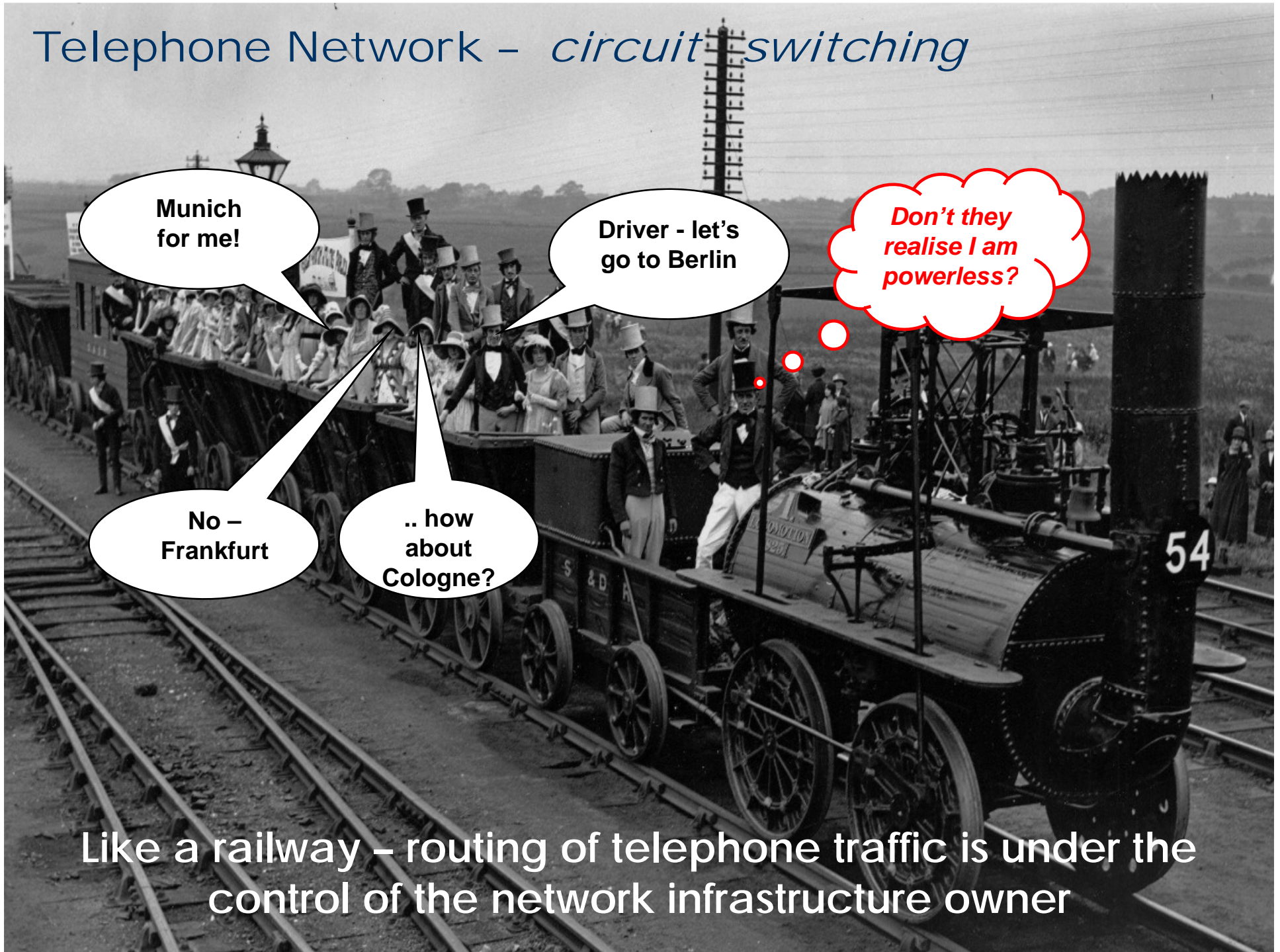
Telephone Operators Business Model

ENTIRELY DICTATED BY THE FUNDAMENTALS OF THE TECHNOLOGY

GENERATING REVENUE BY:

a) charging end users for exclusive use of a pair of copper wires from their home/desk to the local exchange plus selling/renting them CPE

b) the orderly allocation of scarcity - *trunk and international network capacity (bandwidth)* – charging by the 'bit' (time/distance)

c) latterly, developing and selling network embedded 'value added' services and 'content'

VERTICALLY INTEGRATED MODEL
… infrastructure + services

THE **OPLAN** FOUNDATION

Telephone Operators Business Model

ENTIRELY DICTATED BY THE FUNDAMENTALS OF THE TECHNOLOGY

GENERATING REVENUE BY:

a) charging users for exclusive use of a pair of copper wires to the local exchange plus selling/renting CPE to them

b) the orderly allocation of scarcity - *trunk and international network capacity (bandwidth)* – charging by the 'bit' (time/distance)

c) latterly, developing and selling network embedded 'value added' services and 'content

VERTICALLY INTEGRATED MODEL
… infrastructure + services

THE **OPLAN** FOUNDATION

Total annual charge to the world =

$1,600 Billion *(Source: ITU)*

a) charging users for exclusive use of a pair of copper wires to the local exchange plus selling/renting CPE to them

b) the orderly allocation of scarcity - *trunk and international network capacity (bandwidth)* – charging by the 'bit' (time/distance)

c) latterly, developing and selling network embedded 'value added' services and 'content

VERTICALLY INTEGRATED MODEL
… infrastructure + services

THE **OPLAN** FOUNDATION

"The monopolists, by keeping the market constantly under-stocked, by never fully supplying the effectual demand, sell their commodities much above the natural price. "

The Wealth of Nations, Book I, Chapter VII

Adam Smith

THE OPLAN FOUNDATION

THREE GREAT TECHNOLOGICAL INNOVATIONS OF THE SECOND HALF OF THE 20TH CENTURY

silicon chip

DIGITAL COMPUTER

silicate glass fibre

OPTICAL FIBRE

spread spectrum

SOFTWARE CONTROLLED RADIO

THE **OPLAN** FOUNDATION

Disruptive technologies delivering

'absurdly' low-cost abundance

silicon chip

DIGITAL COMPUTER

silicate glass fibre

OPTICAL FIBRE

spread spectrum

SOFTWARE CONTROLLED RADIO

THE **OPLAN** FOUNDATION

…absurdly abundant low-cost processing power

Gordon Moore, co-founder of Intel

THE **OPLAN** FOUNDATION
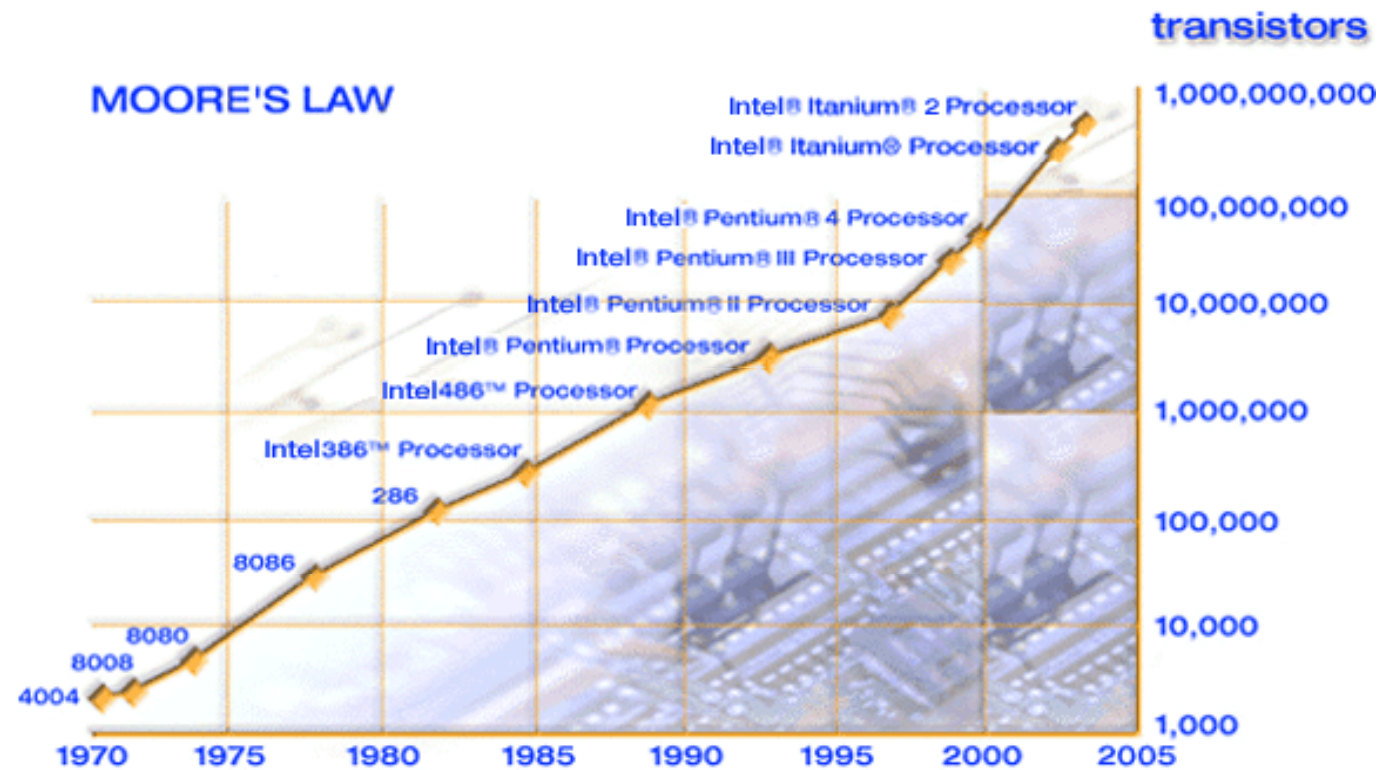
…absurdly abundant low-cost storage

Cost of 1 billion bites of HD storage

1976

$560,000

2006

< $0.56

…abundant low-cost transmission media

WORLD NETWORK SPEED RECORD QUADRUPLED

Caltech, SLAC, Fermilab, CERN, Florida and Partners in the UK, Brazil and
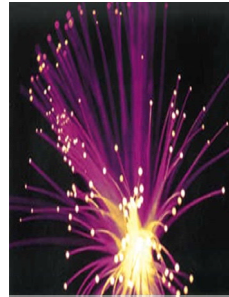*Korea Set 101 Gigabit Per Second Mark During the SuperComputing 2004 Bandwidth Challenge*

PITTSBURGH, Pa – For the second consecutive year, the "High Energy Physics" team of physicists, computer scientists and network engineers led by the California Institute of Technology and their partners at the Stanford Linear Accelerator Center (SLAC), Fermilab, CERN and the University of Florida, as well as international participants from the UK (University of Manchester, UCL and UKLight), Brazil (Rio de Janeiro State University, UERJ, and the State Universities of São Paulo, USP and UNESP) and Korea (Kyungpook National University, KISTI) joined forces at the Supercomputing 2004 (SC04) Bandwidth Challenge to capture the Sustained Bandwidth Award. Their demonstration of "High Speed TeraByte Transfers for Physics" achieved a throughput of 101 gigabits per second (Gps) to and from the show floor, which exceeds the previous year's mark of 23.2 Gbps, set by the same team, by a factor of more than four. The record data transfer speed is equivalent to downloading three full DVD movies per second, or transmitting all of the content of the Library of Congress in 15 minutes. It also has been estimated to be approximately 5% of the total rate of production of new content on Earth during the test.

HOW HAS THE WORLD TELECOM INDUSTRY DEPLOYED THESE TECHNOLOGIES OF ABSURD ABUNDANCE?

silicon chip

silicate glass fibre

spread spectrum

DIGITAL COMPUTER + **OPTICAL FIBRE** + **SMART RADIO**

THE **OPLAN** FOUNDATION

PTO LOCAL EXCHANGE

PTO LOCAL EXCHANGE

PTO LOCAL EXCHANGE

PTO LOCAL EXCHANGE

Trunk / International

Optical Fibre
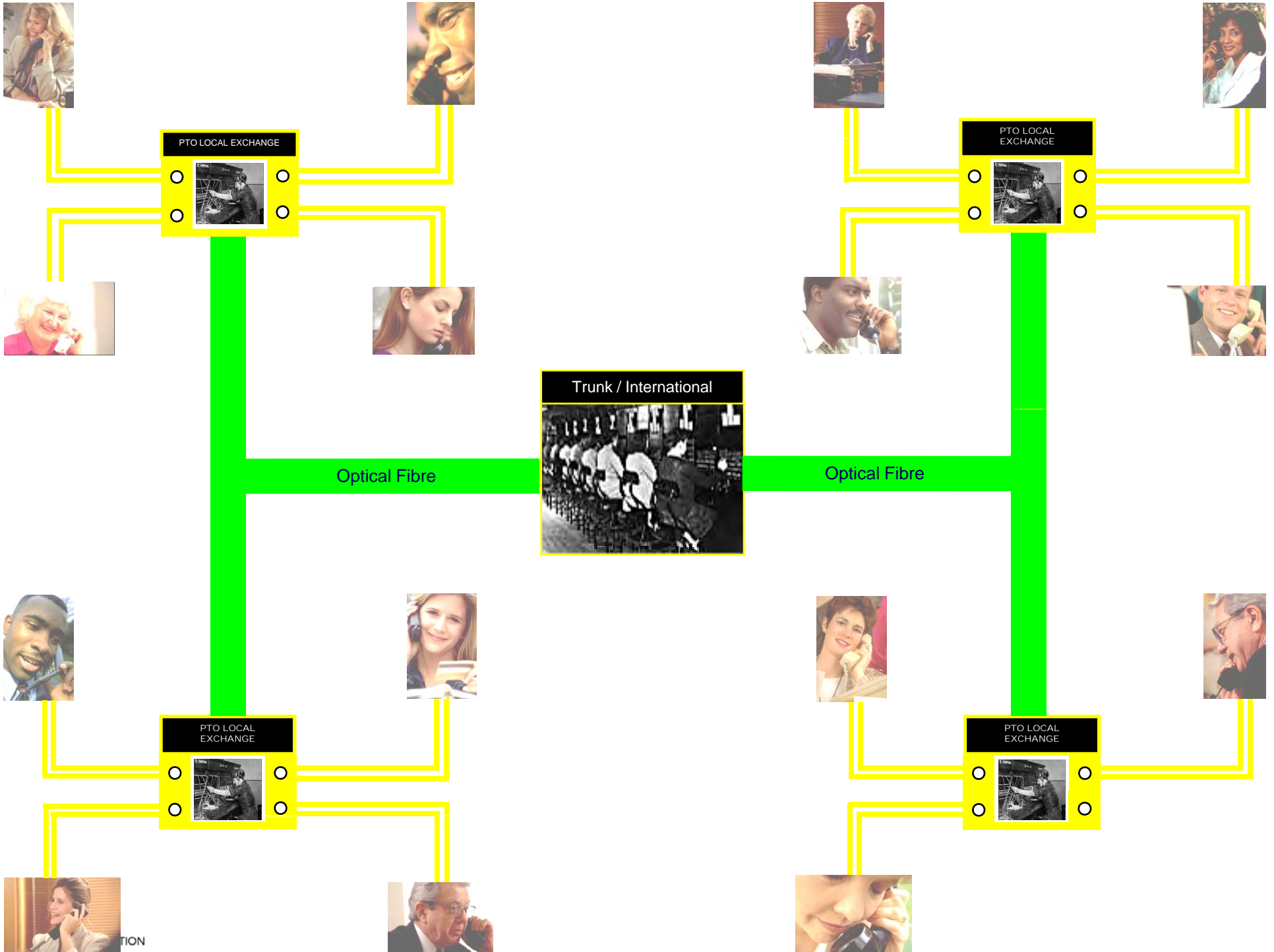
Optical Fibre

Optical fibre submarine systems
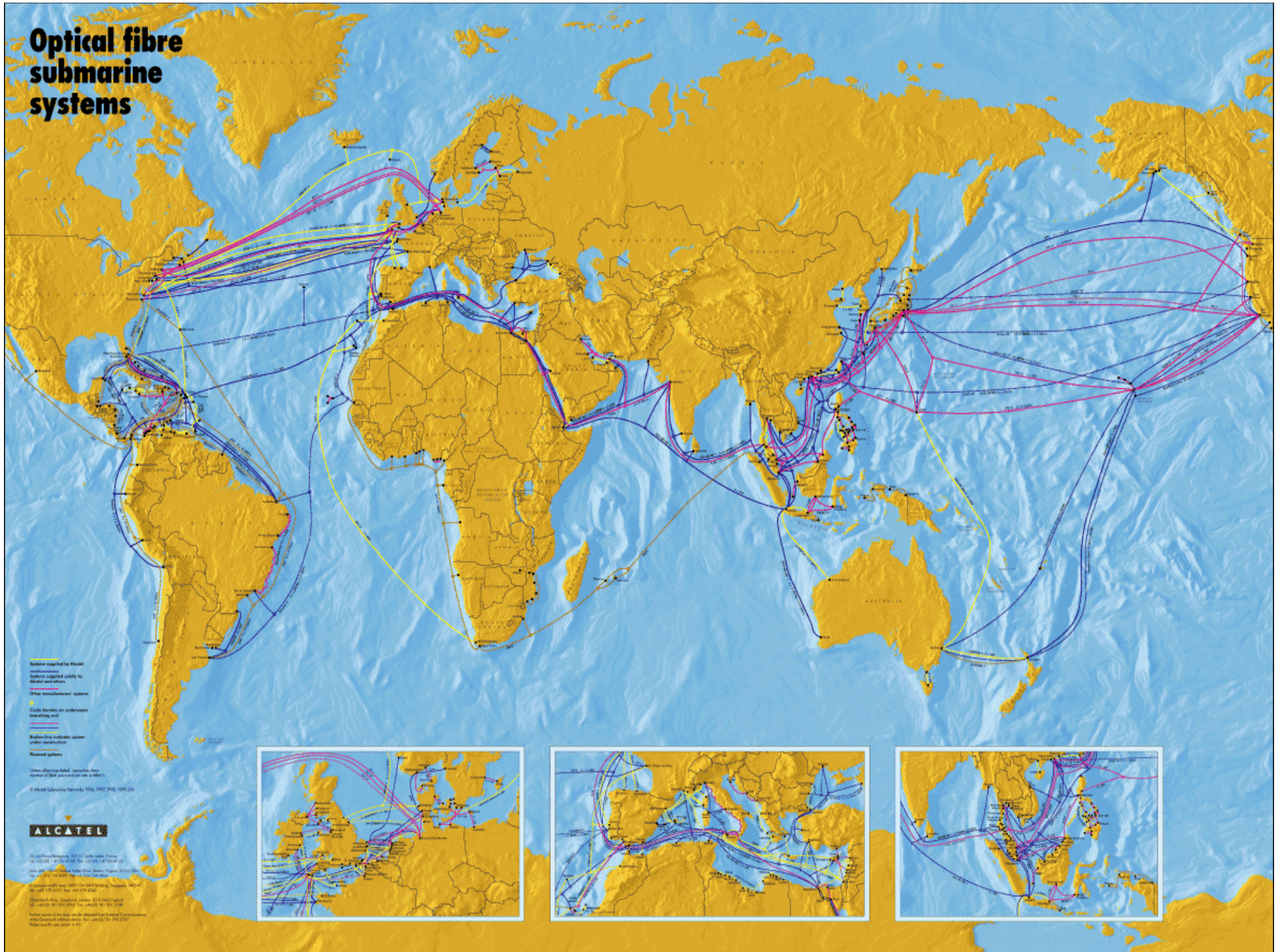
SAHARA SAND STORE

…..sold by the grain or the ton
ONLY AVAILABLE HERE

Fibre Facts

- one strand of fibre has the capacity to carry all the voice and data traffic of any EU country at once

- there are now dozens of operators who have laid oceans of trunk/international fibre around the EU - 90%+ of its capacity being unused (i.e. unlit)

- most of members of the EU public live within a stone's throw of this ocean of bandwidth

… the open market value of anything in infinite supply is … **€ZERO**

THE **OPLAN** FOUNDATION

THE TIMES

Colt faces troubled future, says founder

BY CHRIS AYRES

MALCOLM MATSON, the founder of COLT Telecom, has launched a stinging attack on the FTSE 100 telecommunications company, giving warning that its core business could soon be destroyed.

The entrepreneur, who founded COLT in 1989 as City of London Telecommunications, claims it will soon face a collapse in the price of bandwidth, or telecoms capacity. Mr Matson sold his stake in COLT five years ago, before the extraordinary uplift that has given the company a stock market value of £13 billion despite being set to lose about £100 million this year.

Mr Matson claims that he was responsible for hiring Paul Chisholm as the company's chief executive, and for attracting America's Fidelity Investments as a major shareholder. However, he now believes there will soon be massive over-sup-

ply of the kind of fibre-optic cable networks that COLT is building throughout Europe.

He said: "COLT has profited hugely from the surge in demand, but there is an awful lot of fibre around. In the City alone, there are at least 13 fibre networks. Tariffs will eventually fall below zero. It will not be enough to just offer free carriage and access."

Mr Matson made the comments at the weekend while launching his new company, Datatrust Corporation. The company, which will be run by David Stockley, a former executive of EMI, and Amy Robson, who helped to set up the Capital One credit card company in the UK, is currently in talks to raise £12.2 million.

Datatrust will act as a "personal data minder", screening its customers from unwanted direct marketing and making sure that they receive commercial material only on subjects in which they are interested.

The company, which has signed up the US software company Oracle as a strategic partner, will operate its service via the Internet, fixed-line and mobile phones and digital television. Its first services will be launched next summer.

COLT, meanwhile, is addressing the problem of over-supply in the telecoms industry by gradually making the company more dependent on services related to e-commerce. However, in a series of recent City briefings, Mr Chisholm said it was likely to take some time for mushrooming demand for bandwidth to be met by supply.

Matson: stinging attack

22nd November 1999

Digital Computer

Digital Computer

Digital Computer

Optical Fibre

Optical Fibre

Digital Computer
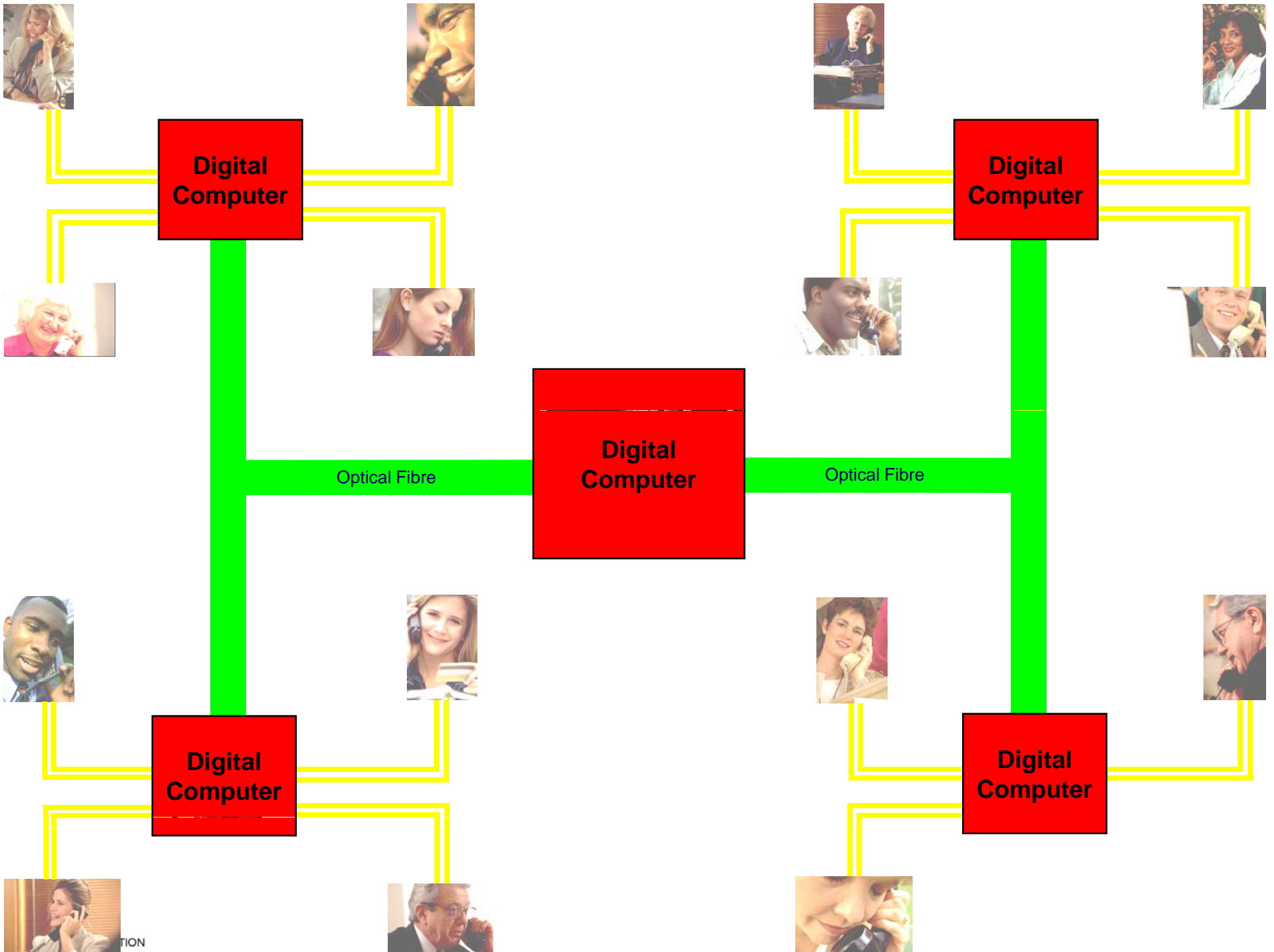
Digital Computer

Ken Olsen, CEO Digital Equipment Corporation - 1977

"There is no reason for any individual to have a computer in their home."

THE **OPLAN** FOUNDATION

Digital Computer

Digital Computer

Digital Computer

Digital Computer

Digital Computer

Digital Computer

Digital Computer

Digital Computer

Digital Computer

Digital Computer

Digital Computer

Optical Fibre

Digital Computer

Optical Fibre

Digital Computer

Digital Computer

Digital Computer

Digital Computer

Digital Computer

Digital Computer

Digital Computer

Digital Computer

TION

END USER

INTELLIGENT
CPE
+
LIMITED
NETWORK
CAPACITY

NETWORK

DUMB
ROUTERS
+
INFINITE
NETWORK
CAPACITY

Digital Computer

Optical Fibre

Optical Fibre

Computer Digital

Computer Digital

Computer Digital

Computer Digital

Computer Digital

Computer Digital

Computer Digital

Computer Digital

Computer Digital

Computer Digital

Computer Digital

Computer Digital

Computer Digital

NETWORK

DUMB
ROUTERS
+
INFINITE
NETWORK
CAPACITY

END USER

INTELLIGENT
CPE
+
LIMITED
NETWORK
CAPACITY

Optical Fibre

Optical Fibre

Digital Computer

Digital Computer

Digital Computer

Digital Computer

Digital Computer

INTERNET

Telco computers **v** **USER devices**

The Big Questions:

1. Who will be 'in control'?

   telcos or users

2. Will OUR devices remain free to communicate directly with each other and not just via the Telcos ?

THE FIRST MILE
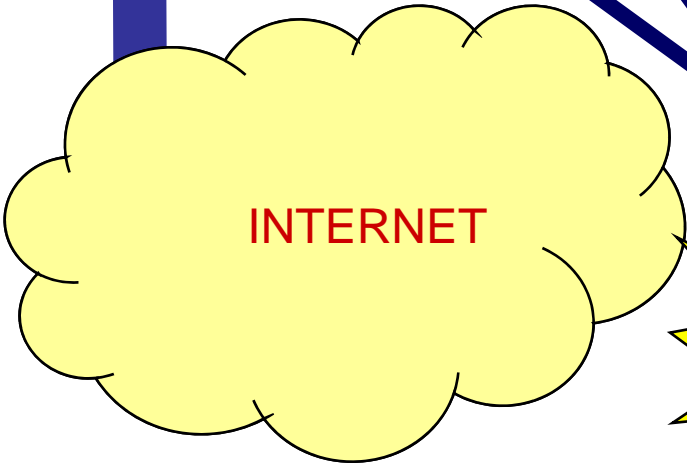
"THE MOTHER OF ALL BATTLES"

NOW running in a city near you!

THE **OPLAN** FOUNDATION

Open Networks - a next step in Human Social Evolution

- a historical context and perspective gives understanding

- disruptive and abundant digital technologies drive them

- our local economies will prosper using them

THE **OPLAN** FOUNDATION

Telephone Operators Business Model

ENTIRELY DICTATED BY THE FUNDAMENTALS OF THE TECHNOLOGY

GENERATING REVENUE BY:

a) charging users for exclusive use of a pair of copper wires to the local exchange plus selling/renting CPE to them

b) the orderly allocation of scarcity - *trunk and international network capacity (bandwidth)* – charging by the 'bit' (time/distance)

c) latterly, developing and selling network embedded 'value added' services and 'content

VERTICALLY INTEGRATED MODEL
… infrastructure + services

Total annual charge to the world =

$1,600 Billion *(Source: ITU)*

a) charging users for exclusive use of a pair of copper wires to the local exchange plus selling/renting CPE to them

b) the orderly allocation of scarcity - *trunk and international network capacity (bandwidth)* – charging by the 'bit' (time/distance)

c) latterly, developing and selling network embedded 'value added' services and 'content

VERTICALLY INTEGRATED MODEL
… infrastructure + services

THE **OPLAN** FOUNDATION

FREE TRADE

Society is best served if raw materials and physical products pass freely through the *sea*ports and *air*ports of the world, without restriction and the imposition of special tariffs or tolls

FREE TRADE

Is not the same true for the 'bits and bytes' of information passing between our **computer** ports?

Would we not prosper if there were no artificially sustained *(i.e. through regulation and public policy)* 'service operators' able to impose restrictions, tariffs and toll charges?

FREE TRADE

Wealth diffusion through increased market transparency creating increased competition

SUPPLY

DEMAND

$1 → $1.5 → $2.25 → $3.38 → $5.06 → $7.59

+50%   +50%   +50%   +50%   +50%

Open Access Connectivity bringing seller and buyer together

$3 → $4.50 → $6.75

+50%   +50%
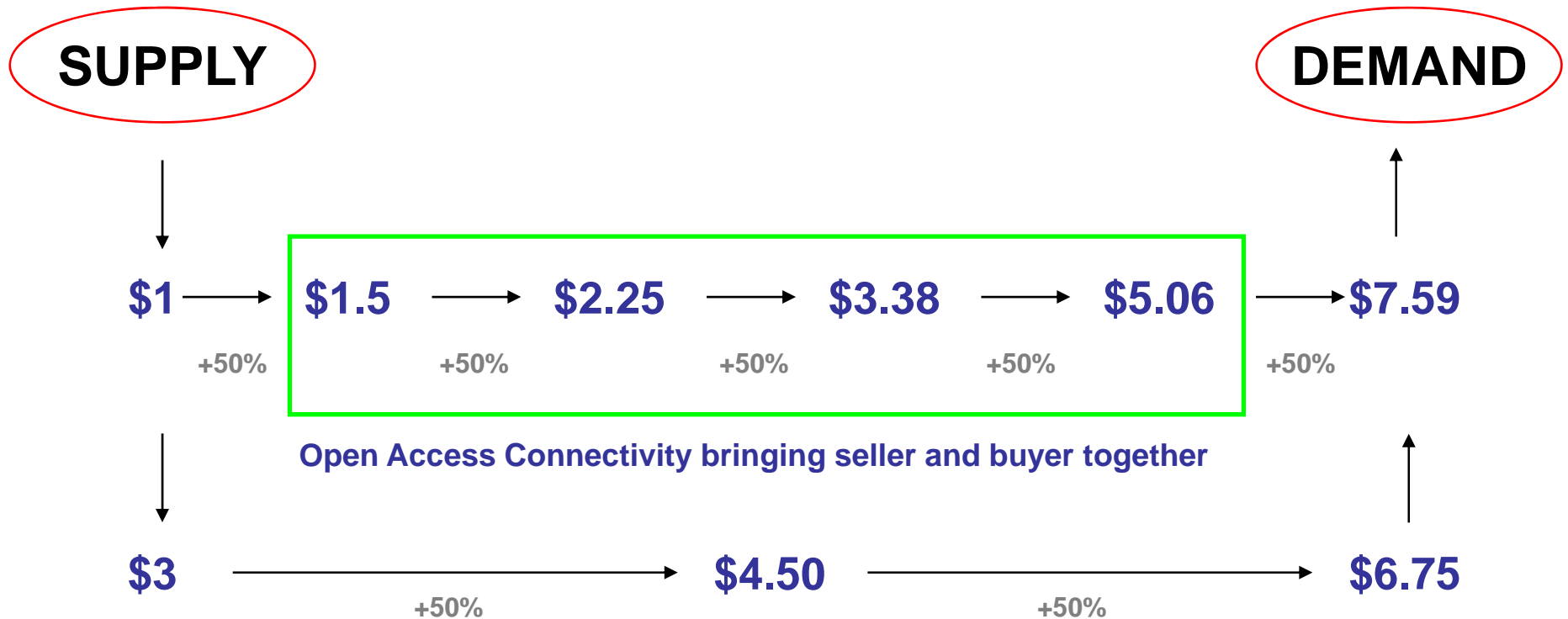
Seller and Buyer both gain increased value

THE OPLAN FOUNDATION

What if 'MY CITY' could save much of this cost by doing things differently?

- lower the cost of living

- increase business competitiveness

- lower cost and improved level of public services

- stimulate inward investment

THE **OPLAN** FOUNDATION

What if 'MY CITY' could save much of this cost by doing things differently?

HOW ?

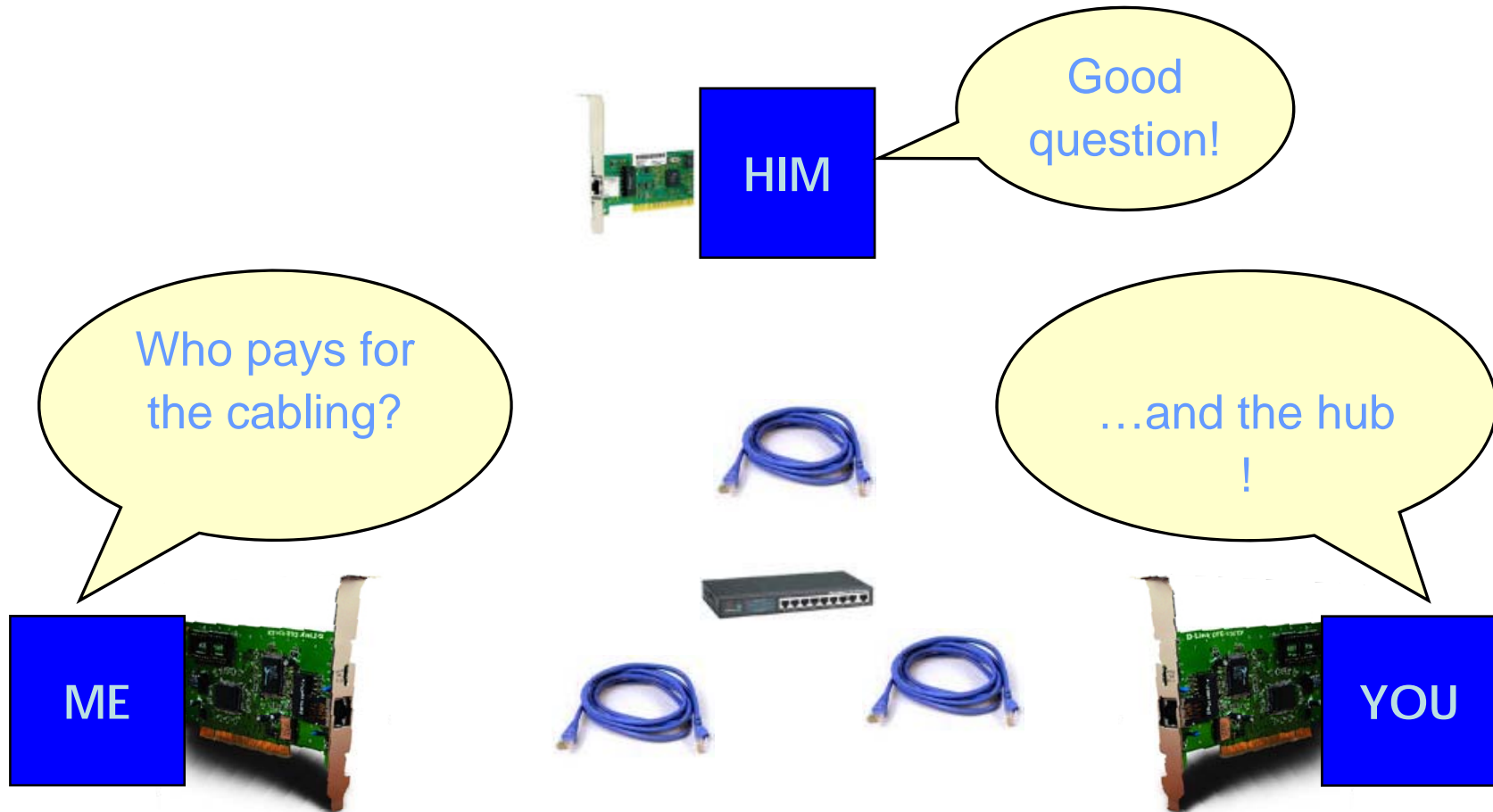An **O**pen **P**ublic **L**ocal **A**ccess **N**etwork (OPLAN)

can be built, financed and operated under a radically

different business model which will deliver

massive savings and benefits to any community

… to its citizens and end users

Absurdly Abundant Bandwidth is 'FREE'

….once you have paid for the hardware

Absurdly Abundant Bandwidth is 'FREE'

….once you have paid for the hardware

HIM

ME

YOU

Absurdly Abundant Bandwidth is 'FREE'

....once you have paid for the hardware

The conventional role of the telecoms sector in the local community

HIM

HIM

ME

_YOU

ME

YOU
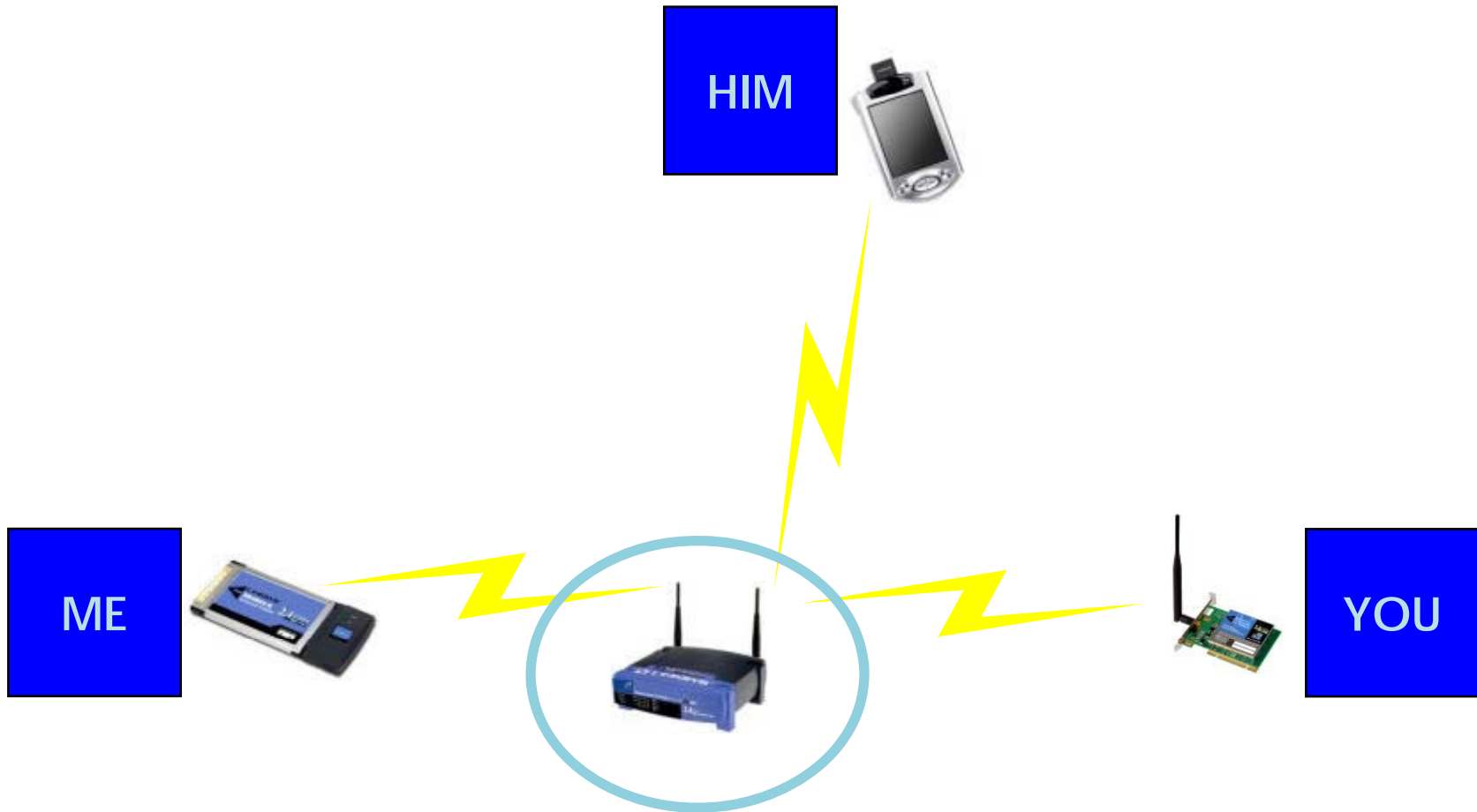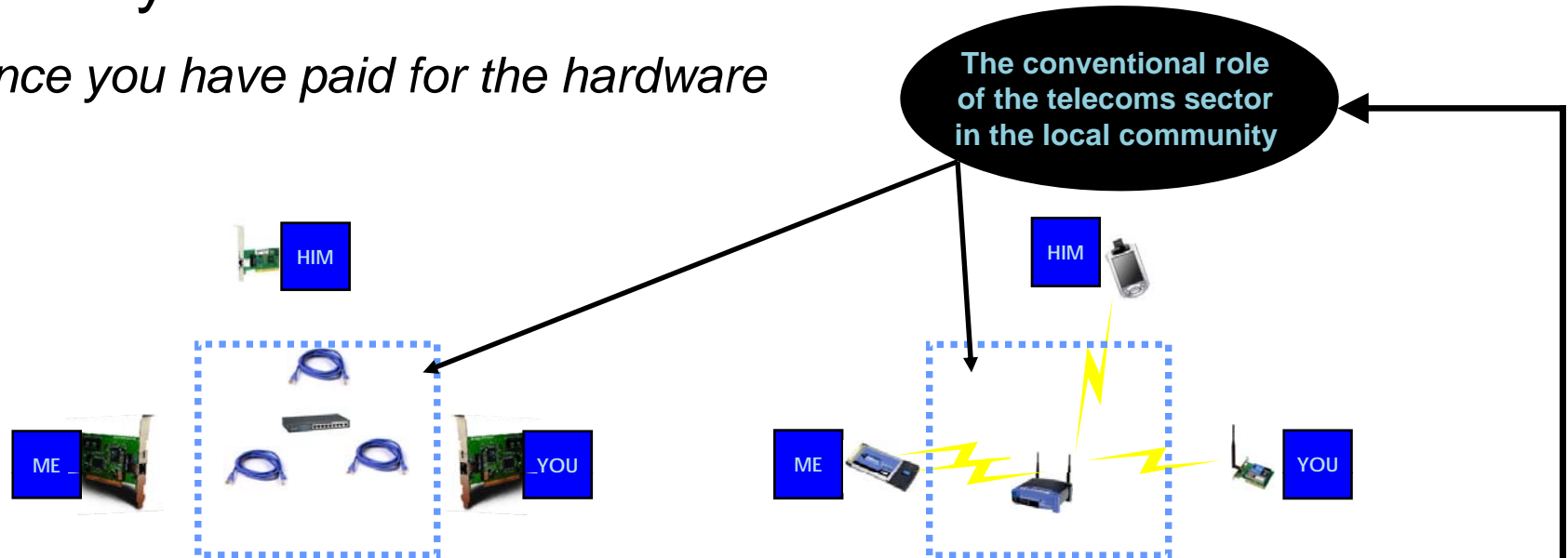
- each buys a "piece of cable/WiFi" and we share the cost of the hub

- we form a corporate body and pool purchase and own it all through that

- we lease it from a third party who buys it for us

… whichever option we choose, there are no ongoing 'usage' charges

The last thing we ought to do is let a third party control it and then offer us a 'service' based on charging us as much as it can per 'bit' for using it

THE **OPLAN** FOUNDATION

Absurdly Abundant Bandwidth is 'FREE'

….once you have paid for the hardware

The conventional role telecoms sector local community

HIM

HIM

ME

YOU

- each buys a "p..."
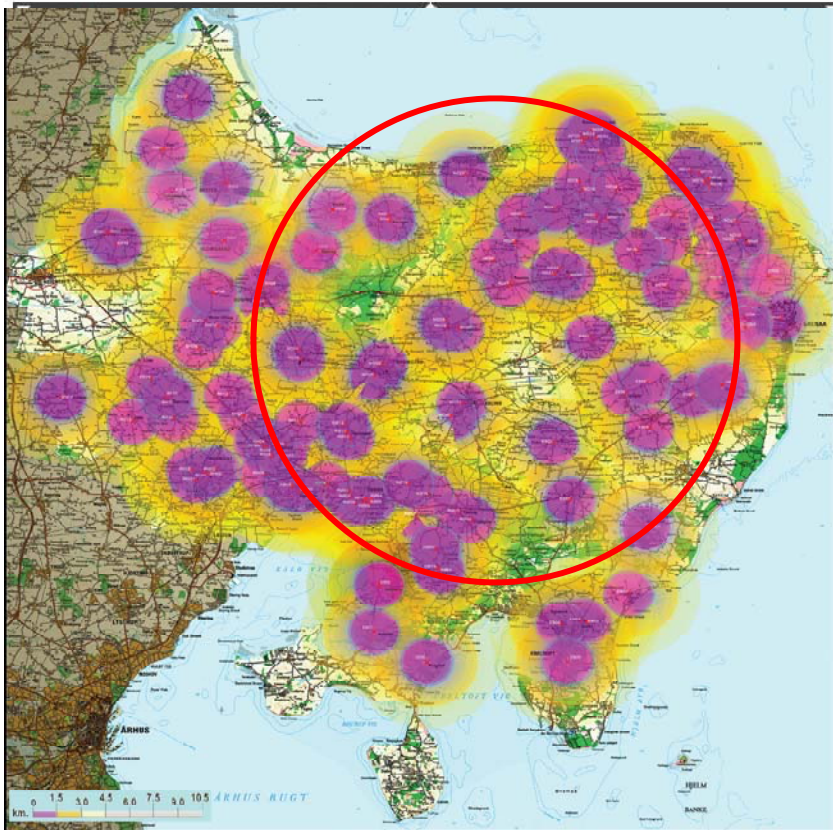- we for... that
- we lea...

… whichever ... usage' charge...

The ... is ... a third party control it a... er us... a 'service' based on charging us... much as it can per 'bit' for using it

… this principle is scaleable to a business park, to a city … to the world!

THE OPLAN FOUNDATION

Djursland - Denmark

5,000 + linked on a wireless OPLAN network

THE **OPLAN** FOUNDATION

Savings by high speed Internet access
with unlimited consumption via DjurslandS.net's area nets

ISP	speed	Once	month	year 1	year 2	save year 1	save year 2
Djursnet	**4096/4096 Kbit/s**	**267**	**13**	**423**	**156**		
Cybercity	4096/256 Kbit/s	26	47	590	564	167	408
tele2	4096/256 Kbit/s	0	50	600	600	177	444
Stofanet	4096/512 Kbit/s	0	61	732	732	309	576
TDC	4096/512 Kbit/s	79	63	835	756	412	600
DanskKabelTV	4096/256 Kbit/s	93	53	731	638	308	482

Average savings in Euro	**275**	**502**

	1.000 new	4.000 now
Connected households in 2006		
Expected savings 2006, all connected households on Djursland	275.000	2.008.000
Savings in all 2006, (self-sponsoring of the IT-society on Djursland)		2.283.000

Open Networks - a next step in Human Social Evolution

- a historical context and perspective gives understanding

- disruptive and abundant digital technologies drive them

- our local economies will prosper using them

- our cities, citizens and societies will flourish with them

Take a look at an earlier technological revolution

THE AGE OF RAILWAYS, COAL AND THE STEAM ENGINE

… and the golden age it created

… with countless unforeseen benefits for society and new industries created

THE AGE OF RAILWAYS, COAL AND THE STEAM ENGINE

The Golden Age

1846 - Railway reaches Blackpool

Birth of mass-market seaside resort

1802 : 473 residents

1899 : 47,348

1825 - 25 miles of track

1850 - 6,800 miles of track

1879 - First city in the world to install street lighting

1845 - Local "sun-based" time abandoned for standardised time

1860 - Long distance haulage of milk – massive improvement in the nation's teeth

1871 - Railway reached Clydebank giving birth to one of the greatest ship building centres in the world

… countless unforeseen and undreamed of benefits for society industries created

THE **OPLAN** FOUNDATION

Our cities and society will flourish with OPLANs

What happens to a community when, at zero marginal cost, its citizens have access to abundant bandwidth to enhance and improve existing socio-economic behaviour… local institutions… and their public and private lives, transactions and relationships?

as with earlier technological revolutions brought about by disruptive technologies enabling *new* infrastructures – the potential social benefits are limited only by human imagination and creativity

THE **OPLAN** FOUNDATION

Our cities and society will flourish with OPLANs

- *new* healthcare applications and services

- *new* 'user created' media

- *new* e-businesses created

- *new* e-learning enabled

- *new* …….. ?

as with earlier technological revolutions brought about by disruptive technologies enabling *new* infrastructures – the potential social benefits are limited only by human imagination and creativity
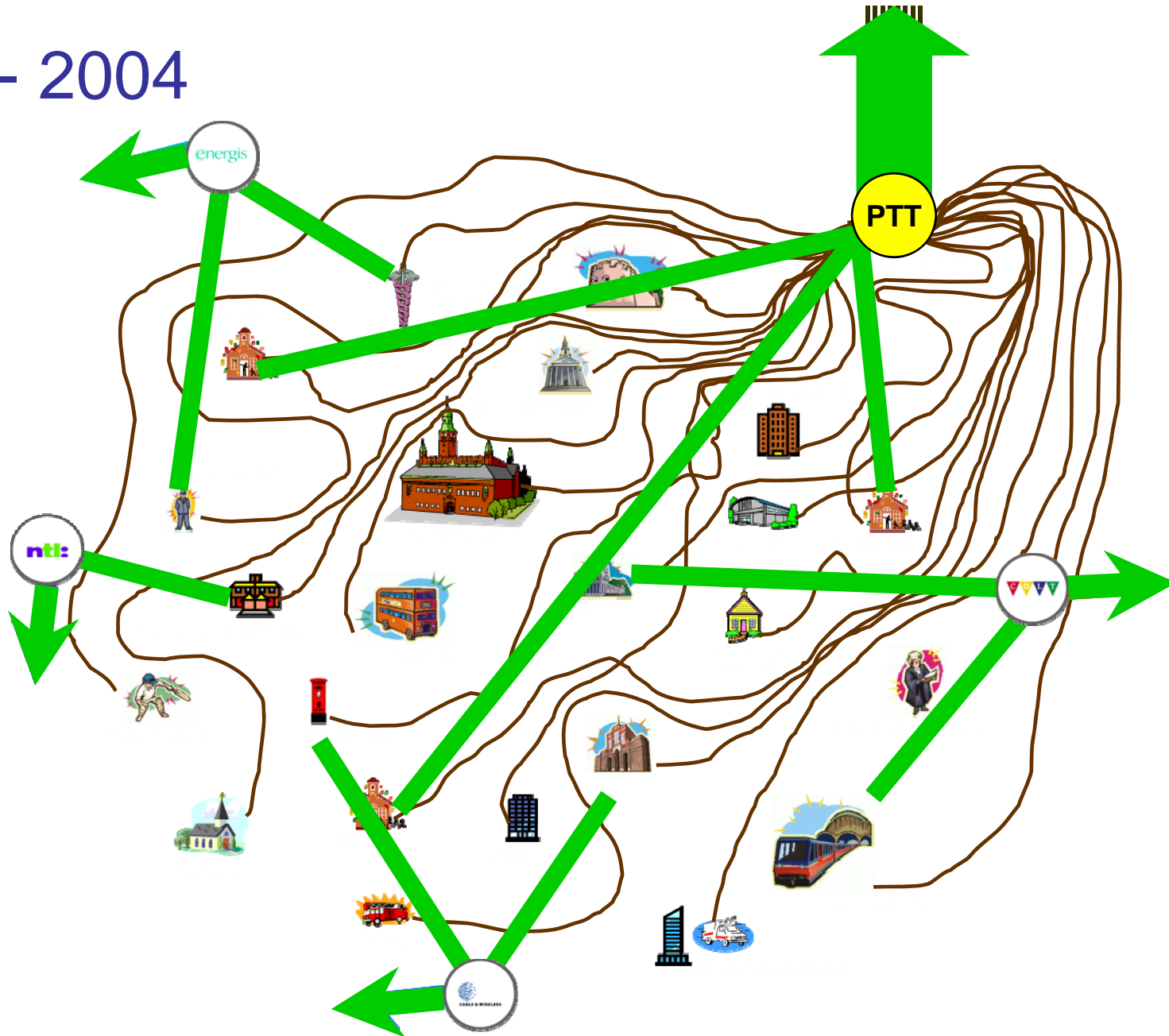
THE **OPLAN** FOUNDATION

Our cities and society will flourish with OPLANs

Just as happened with the creation of the PC which gave birth to a million new applications and uses, never before dreamed of

as with earlier technological revolutions brought about by disruptive technologies enabling *new* infrastructures – the potential social benefits are limited only by human imagination and creativity

1884 - 1984

In the beginning …

PTT

THE OPLAN FOUNDATION

1984 - 2004

PTT
energis
nti:
CABLE & WIRELESS

THE **OPLAN** FOUNDATION

2004 -

The Telco FTTH model

PTO Computer

THE **OPLAN** FOUNDATION
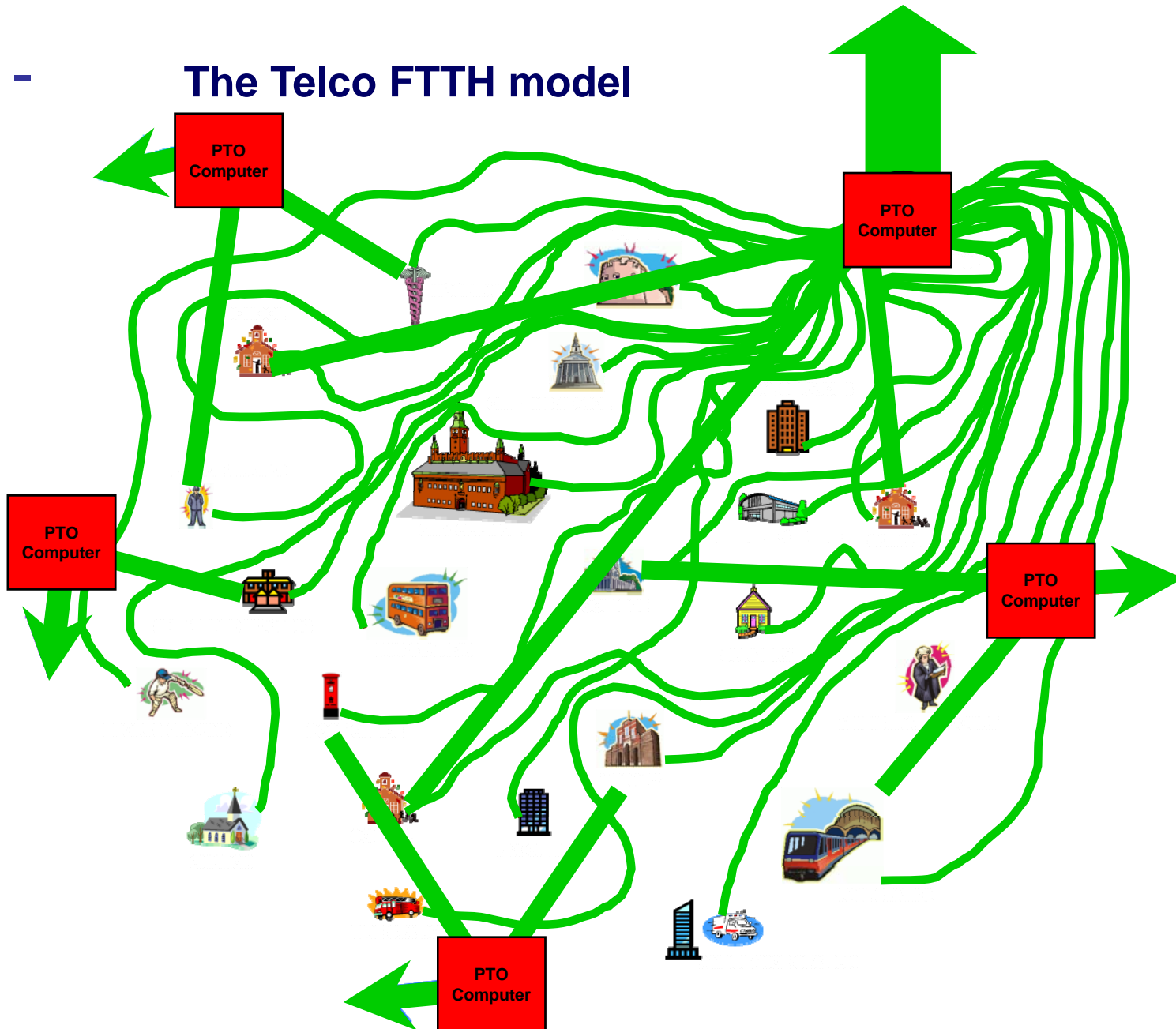
2006 - Open Public Local Access Network   OPLAN

PTT
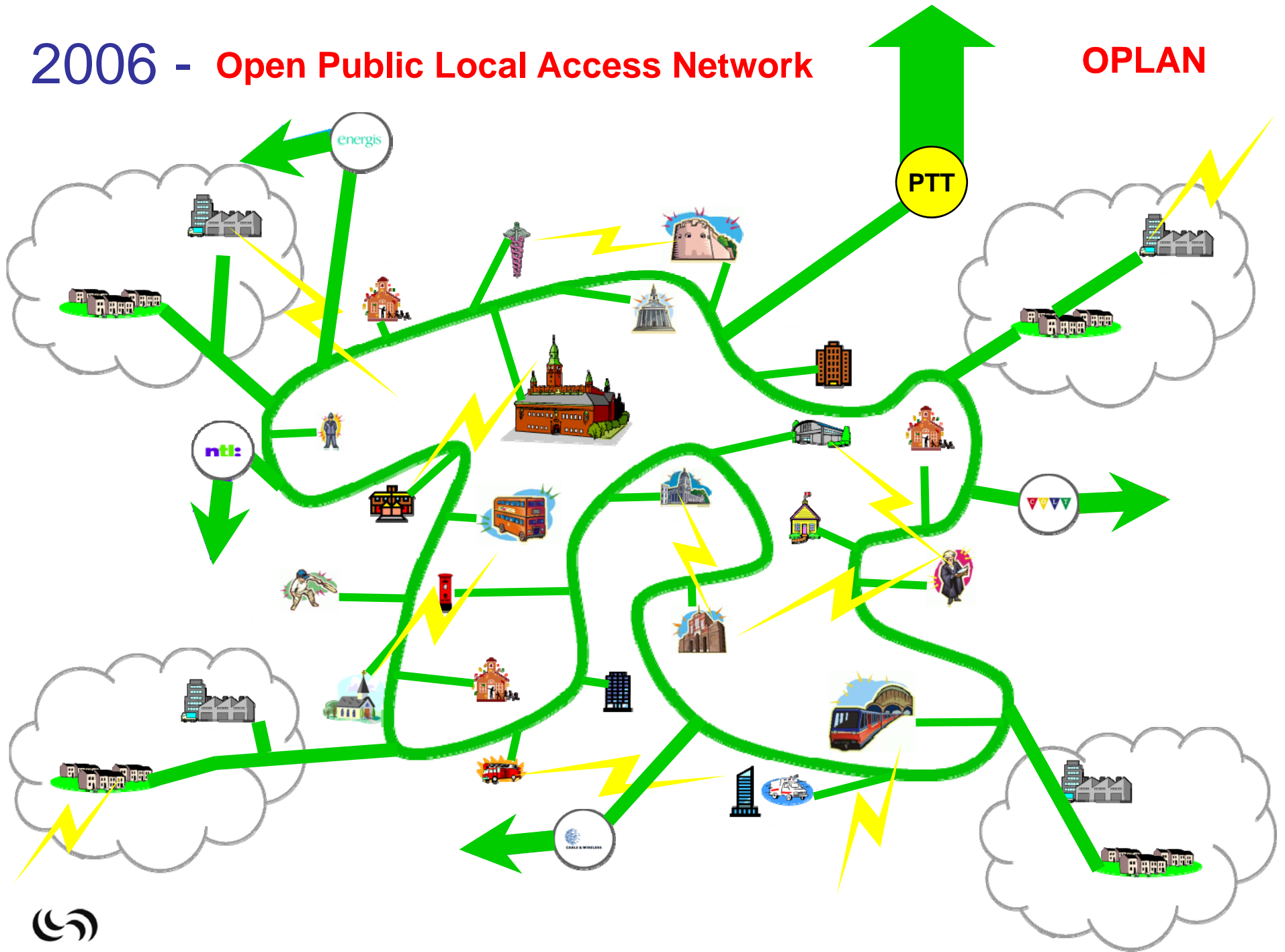
THE OPLAN FOUNDATION
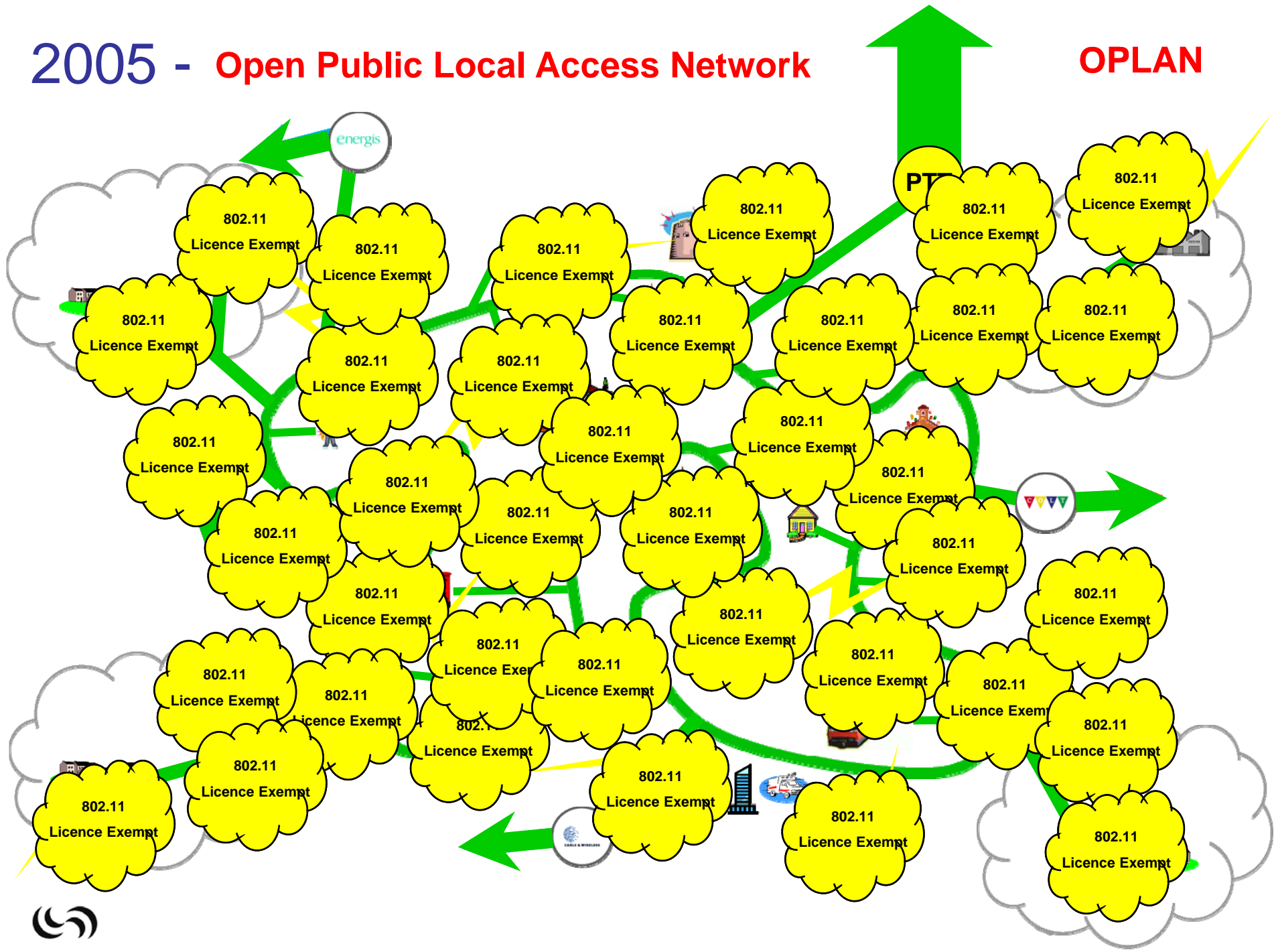
Our communities and society will flourish with OPLANs

Visionary local politicians and democratic leaders are beginning to grasp this …

*"Let's create a competitive 'digital divide' between our city and others …let's make ours, **more** accessible and connected and 'open' than the next city – let's use the new digital technologies to enhance life, work, inward investment, play and tourism in the 21st century !"*

Amsterdam Deputy-Mayor
Mark van der Horst

".… we make a big step towards the deployment of a citywide fiber-to-the-home network. This enables our city to compete with other European cities. The fiber network delivers to Amsterdam an innovative and freely accessible **open** *infrastructure, suitable to support growth in demand for the next 30 years or more. In this way we ensure a wide open marketplace for innovative service-providers and economic growth, as well as a fast track for the smarter and cheaper delivery of care, education and other public services."*

City of Amsterdam Press Release, November 3 2005

THE **OPLAN** FOUNDATION

Eindhoven Mayor

Alexander Sakkers

"In 2004 the Dutch government gave to the Eindhoven Region/Southeast Brabant, the title of BRAINPORT because the economic identity of our region is defined by high-tech research and development and production activities. We believe that the development an open public local access network to serve the community is vital to it remaining globally competitive in the 21st century knowledge economy"

Mayor Panayiotis Tzanikos
Municipality of Amaroussion
Athens , Greece

"We feel that we are entering a period when towns and regions will compete with each other and one of the key parameters in the competitiveness of the city is telecommunications. … I think that the level of what we are getting [from the conventional telecommunications sector] is not enough to equip the city for the next generation which is coming….. we feel that the way they [the telecoms operators] operate they keep the citizens, the businesses, the social groups, outside of the new era which is arriving so they do not have the motive to use the network to make new things, new creations and services."

OpenPlanet interview October 2005

THE **OPLAN** FOUNDATION

Knysna Municipality (South Africa) *PRESS RELEASE*

www.oplan.org

The Knysna Municipality has taken the initiative to establish the first completely WiFi covered town in Africa. The area is roughly 1000km2 and includes the towns of Knysna, Sedgefield, Reenendal and Karatara…. 62 Municipal sites have now been installed in the region, including:

- **10 Schools**
- **3 Clinics**
- **2 Museums**
- **8 Libraries**
- **1 Fire Department**
- **21 Municipal Staff home connections.**
- **17 Municipal Offices**
- **1 Municipal Datacenter**

THE **OPLAN** FOUNDATION

Sohail Akram
CEO, SISservices, Rawalpindi

"My success was all made possible because of people of my village and I very strongly believe that it is about time to return the favour by taking the world to them. I want to do that by providing them wireless connectivity over their own OPLAN"

P@SHA
2006
P @ S H A
Rural Wireless Connectivity Conference

Lahore, Pakistan : 15th November 2006

THE **OPLAN** FOUNDATION

Open Networks - a next step in Human Social Evolution

- a historical context and perspective gives understanding

- disruptive and abundant digital technologies drive them

- our local economies will prosper using them

- our cities, citizens and societies will flourish with them

- the human spirit and relationships will thrive through them

THE **OPLAN** FOUNDATION

Open Networks - a next step in Human Social Evolution

Since the creation of the world, the

human spirit has thrived on …

CONVERSATION

… being able to exchange ideas, emotions,

information and creative output in

freely formed relationship with others

THE **OPLAN** FOUNDATION

Open Networks - a next step in Human Social Evolution

Since the creation of the world, the

human spirit has thrived on …

~~DOWN-LOADING CONTENT~~ ?

… being able to exchange ideas, emotions,

information and creative output in

freely formed relationship with others

THE **OPLAN** FOUNDATION

Open Networks - a next step in Human Social Evolution

Since the creation of the world, the

human spirit has thrived on …

CONVERSATION

… being able to exchange ideas, emotions,

information and creative output in

freely formed relationship with others

THE **OPLAN** FOUNDATION

PTO LOCAL EXCHANGE

For over a hundred years, the
success of the telephone was
Driven by CONVERSATION
not CONTENT
Voice

The 'killer application'
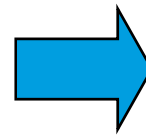for mobile telephony has
been CONVERSATION
not CONTENT
Voice and SMS
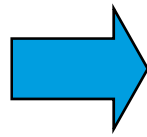
WEB 2.0

Social Networking

"digitally enriched conversation"

YouTube™ Broadcast Yourself

- Founded by 3 west-coast 'kids' on February 14, 2005

- A community to watch and share videos - the service is free for everyone

- Upload, tag and share videos worldwide – *creators = consumers = creators*

- one week in July 2006 : 12.8 million visits   *(Nielsen/Net Ratings)*

- July 2006 = 724,000,000 page views   *(Nielsen/Net Ratings)*

- 16th most visited site on the world wide web   *(Alexa)*

- 2.5 billion videos watched in June   *(YouTube)*

- 29% of the US multimedia market   *(Hitwise)*

- 65,000 uploads a day (i.e. 1,538 downloads per upload)   *(Reuters)*

- 20,000,000 unique users per month   *(Reuters)*

- partially credited for upset of U.S. Sen. Joe Lieberman in Connecticut

LOCAL WEB 2.0

OPLAN

"digitally enriched conversation within our local community"

WALTER LIPPMANN 1889-1974

Influential US writer, journalist, and political commentator

" The role of a press is to keep a community
in conversation with itself "

MALCOLM MATSON

" The role of an open public local access
network is to keep a community
in conversation with itself"

Open Networks - a next step in Human Social Evolution

- a historical context and perspective gives understanding

- disruptive and abundant digital technologies drive them

- our local economies will prosper using them

- our cities, citizens and societies will flourish with them

- **the human spirit and relationships will thrive through them**

Why *not* open access networks?

… they will cause massive disruption and distress to the conventional

business models of telecoms/cable operators and 'content/service providers'

…whole industrial sectors from yesterday's 'analogue' paradigms will be

threatened and reshaped or extinguished as new players and new 'open'

business models appropriate to the digital age of 'abundance' start emerging

THE **OPLAN** FOUNDATION

End Users like us

The World can talk for Free

Skype and VoIP is the biggest money making opportunity since Alexander Graham Bell – only this time WE all make money by keeping it in our pockets and purses!

Financial Times : 23rd February 2007

FIXED-LINE TELECOMMUNICATIONS

Colt slumps on declining voice sales

By Philip Stafford

Shares in Colt Telecom slumped nearly 11 per cent after weak full-year figures in which its new chief executive announced the business may need further investment.

Full-year figures showed sharply declining voice revenues still the biggest part of its business.

Colt said the UK and German corporate voice market was worst hit as switched revenue for the quarter decreased by 9.2 per cent.

Colt is moving away from the voice carrier market to higher margin areas such as managed and non-managed network services.

Rakesh Bhasin, the group's fifth chief executive in six years, said: "I am currently reviewing all aspects of the business. The outcome for 2007 is harder than normal to predict because of the potential investment consequences of this review and the uncertain full-year impact of increasingly soft voice revenues."

The company said inves-

tors should not assume any radical change in strategy.

But Dan Gardiner, an analyst at Bridgewell Securities, said: "Nevertheless, clearly this will increase uncertainty."

Colt conducted a corporate review last year, raising €436.6m (£293m) of new equity, paying down a large portion of its debt, delisting on Nasdaq and moving to Luxembourg.

It also recorded its first "true" quarterly profit in its 14-year history.

Revenue for the year to

December 31 fell 1.1 per cent to €1.8bn. Switched revenue in the voice carrier market for the year slid 6.3 per cent to just over €1bn as the business was hit by tough competition and falling prices.

However, revenues in its non-switched business, which includes Ethernet and Managed Services products, rose 6.9 per cent to €767.2m.

Pre-tax losses narrowed from €489.8m to €18.8m while losses per share were 3 cents against 97 cents.

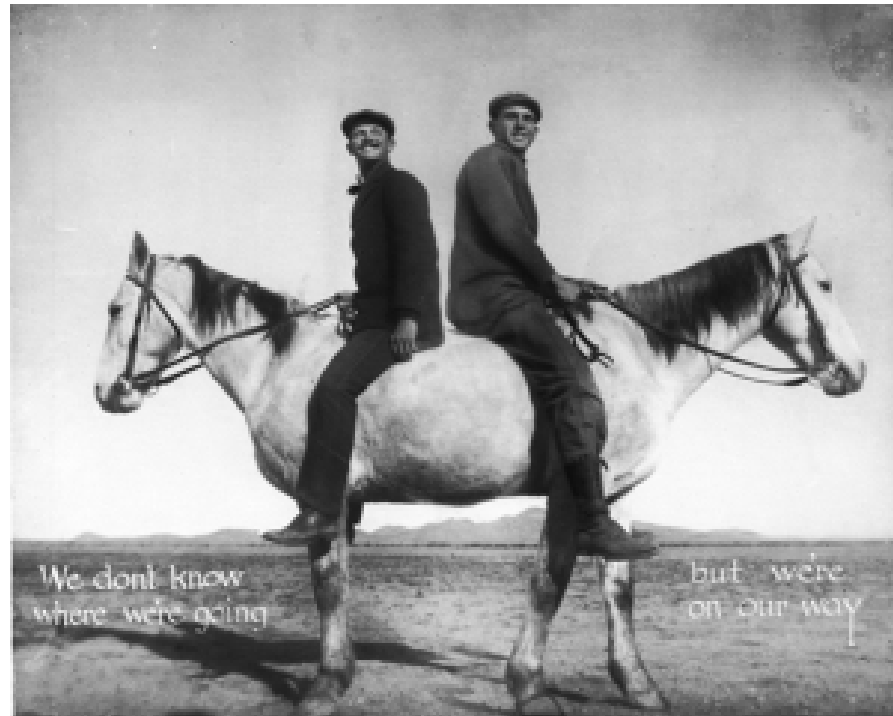Its shares closed down 19p at 158½p yesterday.

1980's

AT&T

Today

at&t

"We don't know where we are going … but we are on our way"

Open **P**ublic **L**ocal **A**ccess **N**etworks (**OPLAN**)

The Benefit to Communities

Munich, Germany : 26th - 27th February 2007

Malcolm Matson

malcolm.matson@oplan.org

THE **OPLAN** FOUNDATION

opening minds to open networks

77 Andrewes House : London EC2Y 8AY : United Kingdom   Tel: +44 230-7638 2344

MÜNCHNER KREIS

THE **OPLAN** FOUNDATION

www.oplan.org