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Go Green with next generation visual technologies

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Polycom, Inc. Overview

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 Financial	NASDAQ listed - $2.2 Billion Market Cap
 Market Leadership	#1 market leader in collaboration solutions
 Innovation	Driver of industry standards and developer of 600 patents
 Unified Communication Ecosystem	AVAYA IBM CISCO Microsoft NORTEL
 Global Presence	40 offices in 22 countries, 13 technical support centres

Introducing

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Visual Communication

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Transforming Video Conferencing

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VC2

Any Audience	Any Time	Any Place	Any Device
Individuals, teams, thousands	Real-time, streamed, archived	Office, remote, mobile	PC, phone, personal / group video system

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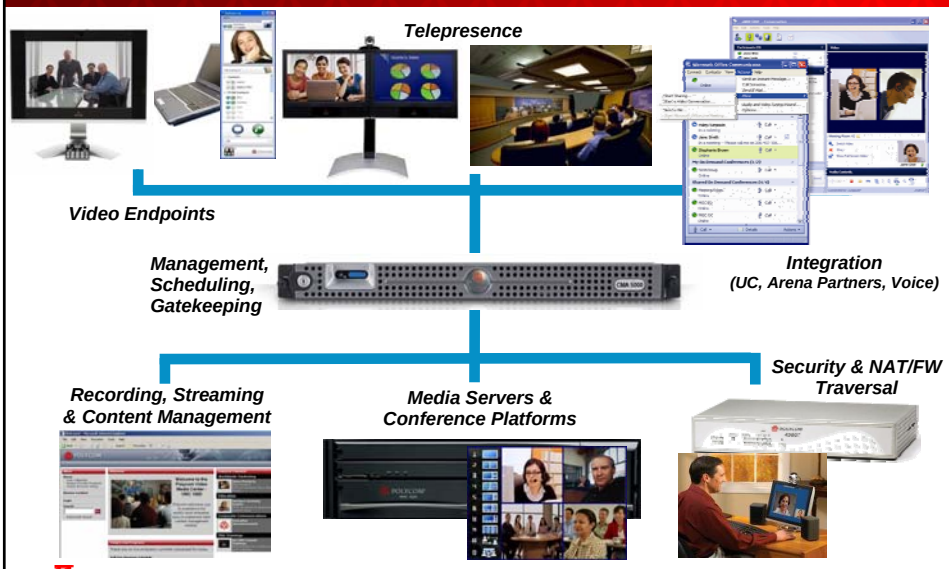
Polycom VC2 solutions: bringing it all together



VC2 – what's driving it?

The Network

- IP, MPLS
- Fiber, broadband
- Class of Service
- Quality of Service
- Cost

Organizational Challenges

- Global Economy
- Competition, productivity
- Travel cost savings
- Stakeholder Expectations
- Attracting top students

User Experience

- High Definition
- Ease of Connecting
- Unified Communications
- Presence and Mobility
- Reliability
- IT Integration

Social / Cultural Shifts

- Lifestyle Choices
- Work life balance
- Environmental awareness
- New generation of students
- Virtual / remote students

Facts About CO_2

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- CO_2 is Largest Contributor to Greenhouse Gases
  - Burning fossil fuels: gasoline, diesel, jet fuel
  - Natural gas appliances
  - Use of electricity
- Single Measure Benchmark
  - Energy efficiency
  - Polluting fuels (measured in tons or Kg)
- USA #1 in World in CO_2 Emissions
  - 25% of world total
- Air Travel Fastest Growing Contributor of CO_2
  - 3.5% today
  - 25% by 2030

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Towards a low-carbon economy

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- Significant Worldwide Awareness
  - Kyoto Protocol (5% CO2 reduction by 2012)
  - European Union (20% by 2012)
  - Lieberman-Warner Bill (US Senate floor 2008)
  - California AB32 (25% reduction by 2020)
- More Companies Going "Clean/Green"
  - Stakeholder pressures
  - Corporate citizen responsibility
- Carbon quotas, credits, trading programs
- Tax breaks

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What Can Companies Do to Reduce CO_2?

- Top Recommended Steps to Reduce CO_2
  - Company culture adjustments
  - Energy efficient facilities
  - Product designs (energy efficient)
  - Manufacturing processes
  - HR/Employee oriented programs
  - Travel policies
  - IT leadership
    - Power saving data centers
    - Extend network to home workers
    - Collaboration and content sharing tools (video and voice conferencing) as alternative to travel

Video Collaboration – The Ultimate Green Tech

Video and Voice Conferencing: Green Technologies

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- Rich Communication, Collaboration, and Content Sharing
  - Global organizations connect without travel
  - Meet and collaborate virtually
  - Enable dispersed workgroups and classes
  - Increased productivity
- Substantially Reduces Carbon Footprint
  - Green meetings and classes
  - Allow attendees to be environmentally friendly

"Much of my participation (in meetings) now comes via (Polycom HD video) teleconference, a "low carbon emissions" way of working ."
- Al Gore

"With the growing emphasis on…green policies in corporations, video conferencing is now seen as having a direct effect on lowering a company's carbon footprint."
- William Stofega, IDC

"Using conferencing and collaboration technologies can make a large contribution to the goal of carbon neutrality."
- Alan Greenberg, Wainhouse Research

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Organizational Environmental Trends

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- Trend is Clear
  - 32.9% of companies increased collaboration tools usage due to carbon impact concerns
  - 28.1% have a carbon emissions policy
  - 26.3% say carbon policy is coming in next year
- "…the next several years will see a deepening of the necessary tools and understanding."

Wainhouse Research, August 2007

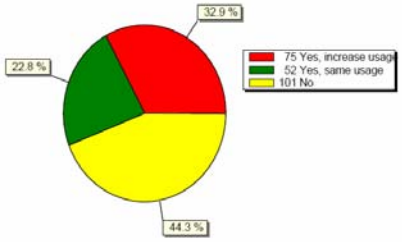

Figure 1 Impact of Concerns about Climate Change on Conferencing Use

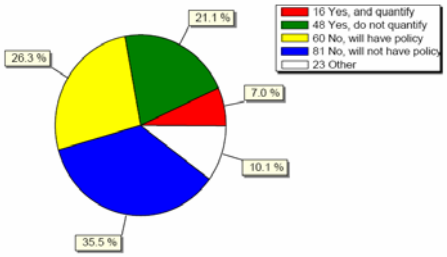

Figure 2 Carbon Emissions Policy

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Video is an easy step for carbon-neutral strategies

Royal Society of NZ recently achieved carboNZero certification.

A key part of its emissions management plan is the installation of a HD video conferencing facility to replace some air travel and associated carbon costs - taxis and hotels for example.

Video is an easy step for carbon-neutral strategies

#easynet

"The initial investment (in Polycom video conferencing) is easily justifiable, ultimately increasing productivity. It's not only protecting the environment, but is common sense for businesses to adopt."
- David Rowe, CEO, Easynet

- Easynet, a service provider in the UK was tasked with the challenge to help British Sky Broadcasting and NDS Group become carbon neutral
  - They did this by installing Polycom HD video and telepresence solutions at 12 BSkyB international locations and Installed video conferencing in 18 NDS group offices

?

- *A recent Australian IDC study, commissioned by Polycom found that in the education sector:*
  - *respondents averaged 1,143 employees and totalled $1,408,290 in travel costs per year*
  - *These respondents stated that 29% of that amount (or $415,058) could have be saved through the use of technology.*

  (May, 2008)

Going Green with Polycom

Go Green Services

Benchmarking and Best Practices

Green Assessment

Tracking and Measurement

- Industry's First Green Services Offering
- Helps organizations plan and optimize video networks as a means to reduce carbon emissions
- Comprehensive methodology with three recommended components
  - **Initial benchmarking** – assess video readiness, provide Benchmarking and Best Practice Assessment
  - **Green roll-out planning** – determine how CO2 emissions can be reduced through collaboration tools, provide assessment and roll-out plan
  - **Tracking and measuring** – quantify CO2 reduction and calculate number of travel miles saved using video conferencing

Video usage = miles saved

Home
Summary
My Endpoints
My Conferences
My Unresolved Systems
My Details
Export Data
Logout

The Visual Environment & A Leading U.K. Bank vs. $C0_2$ emissions

Summary: 2nd Quarter 2007

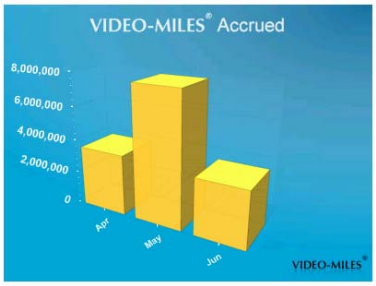
- Total number of calls (in/out): (487/438)
- Total Video-Miles accrued: 14,715,550
- Total carbon saved (tonnes): 4,267.5
- Travel cost saved: £2,045,582
- Travel time saved (hrs): 31,726
- Registered endpoints: 16

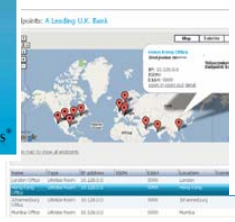
year: 2008 2007
period: Q1 Q2 Q3 Q4 Mth Year

Last update: 4 Jun 2008 00:00:12
Last recorded call: 7 Mar 2008 12:37:32

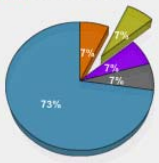
Video usage = miles saved

- Every Videoconferencing system is mapped and can be analysed 24/7 down to number of meetings, Carbon Saved, Video-Miles Travelled, hours used and Man hours saved amongst others.





Endpoint Utilisation*



- Sao Paulo Office
- Los Angeles Office
- Auckland Office
- Mumbai Office
- Others (12)

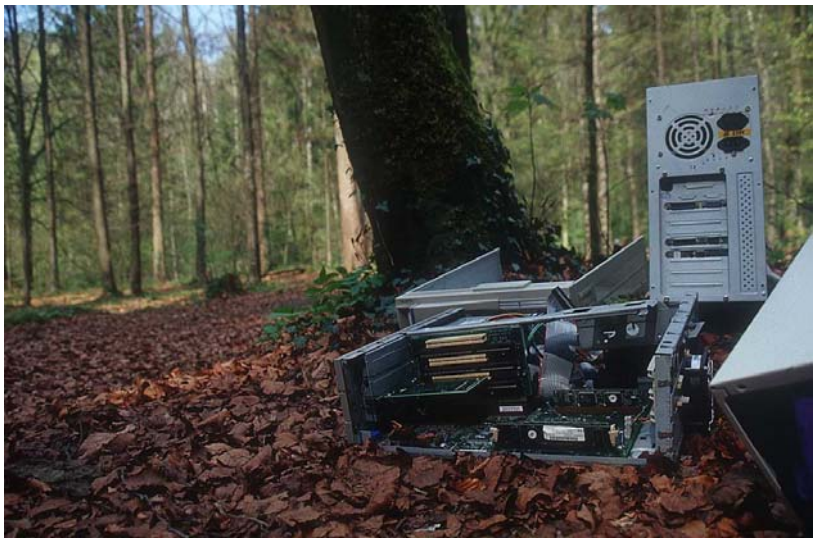
*based on time in use over the period (registered endpoints only)

Most Utilised

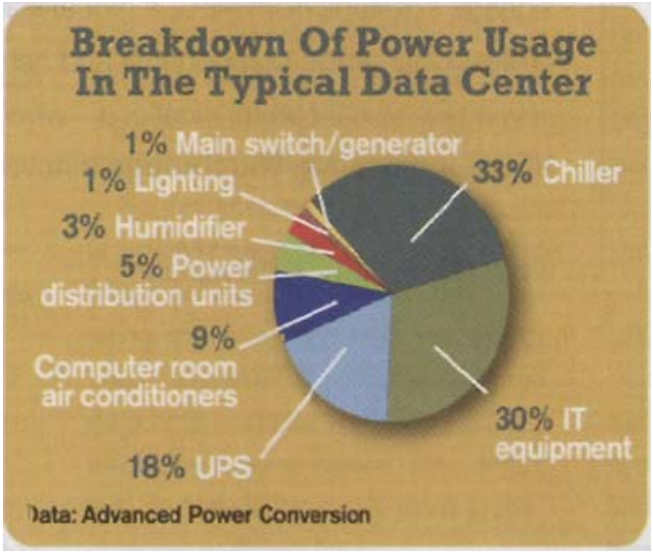
1. Sao Paulo Office	137.2 hrs
2. Los Angeles Office	135.4 hrs

Least Utilised

1. Montreal Office	103.2 hrs
2. Chicago Office	102.8 hrs



Power Consumption in Data Centers



ATCA to the Rescue

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- Technology improvement of blade servers
  - Allows less power/Hz than standalone servers
- DC-power option provides the greatest savings
  - Large-scale DC power distribution throughout the data center
  - No conversion from 110/220V AC to 48V DC in each chassis
- Cooling efficiency by consolidation at rack level
  - Compared to cooling separate 1U server with equivalent of 1 blade
- Dynamic optimization of airflow and power consumption
  - Stay within a predetermined power budget
  - Monitor temperature levels and energy use at blade, enclosure and rack levels
  - Assures continuous operation

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Advanced TCA vs. Closed Box

- **Add blades to standard chassis to scale**
- **Hot-swap blades as requirements change**
- **Mix and match blades – do not discard them**
- **Keep the chassis for long time**

- **Stack more servers to scale**
- **Forklift upgrade when technology moves on**
- **Recycling complete server is expensive**
- **Replace closed box frequently**

Summary

- Increasing global awareness of environmental issues
- Companies and organizations are taking steps to make a difference
- Collaboration technologies are a key way to reduce our environmental impact and also improve productivity and competitiveness
- The next wave of video communication is here