

Précis

Thoughts on IT in Business



Going Visual

Editorial Panel

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Going Visual

If 7% of communication consists of the actual words used, with the tone of voice (38%) and visual cues (55%) making up the balance¹, it comes as no surprise that people have long favoured face-to-face meetings for “getting things done”.

However, with operating models increasingly distributed to accommodate changing work patterns – such as flexi- and at-home working – and new sourcing strategies, meeting face-to-face has become costly and time-consuming. And activities requiring large investments are prime targets for rationalisation.

Enter an age of visual communications that work more easily, for more people, on more devices. Ubiquitous video in its many incarnations could not have come at a better time for travel-weary employees, slashed travel budgets, and collaborative business styles.

In this issue of *Précis*, we look at the new, super-charged world of visual communications. We review the state of the market, architectural considerations and how to overcome implementation hurdles, including having full visibility of organisational needs, fulfilment, and network infrastructure requirements.

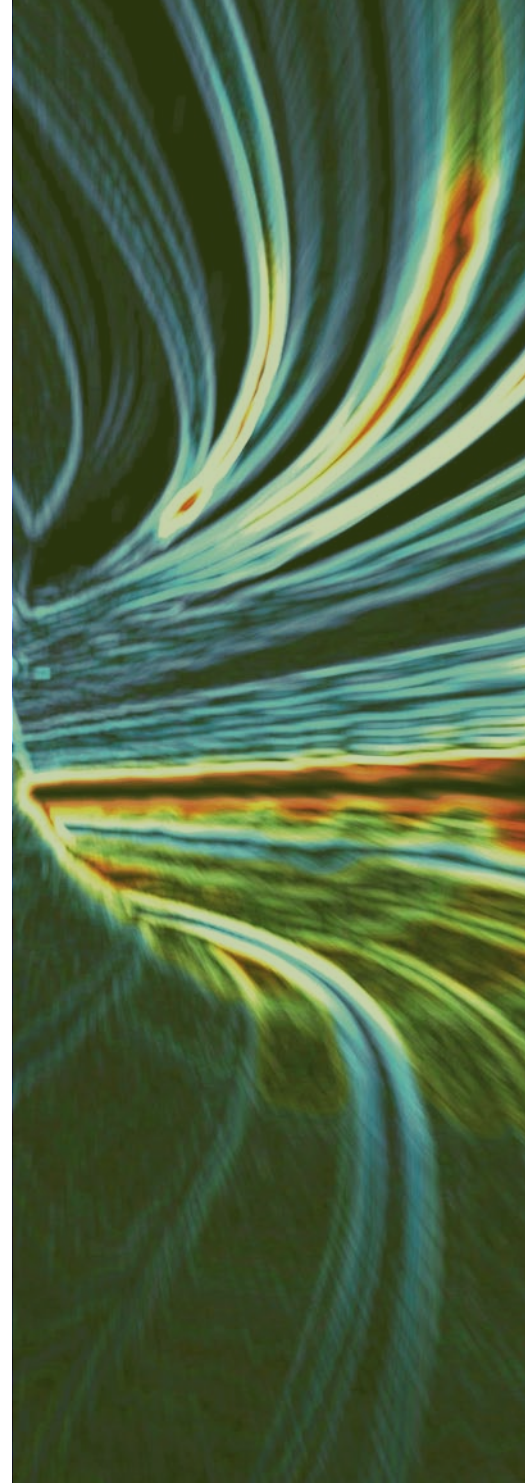
And this review leads us to conclude that, for this new era of visual communications, it's a question of 'when', not 'if' organisations will adopt. So, when are you going visual?

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¹ Mehrabian and Ferris (1967). "Inference of Attitude from Nonverbal Communication in Two Channels". In: *The Journal of Counselling Psychology* Vol.31, 1967, pp.248-52





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- Sobering statistics on the state of the average network from a configuration point of view
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Surveying the visual landscape

Dimension Data takes a look at what's breaking on the horizon of a new visual age of electronic communications

Business communication has come along way since the advent of the PBX phone system and hand-written messages. The lightening speed of conducting business today requires immediate answers to both opportunities and problems and more efficient communications overall. One missed call could mean the difference between landing that new account or losing the deal to your competitor! Pressure to reduce costs has driven globalisation, teleworking and decentralised organisational structures that demand better communications infrastructures. Fortunately, technology advancements have risen to the occasion...

Visual communications is changing the world as we know it. People from across the globe can now communicate

with each other face-to-face at the click of a mouse over the Internet and, in business visual communications have come a long way since the days of poor-quality, room-based video on expensive ISDN links. Today's ubiquitous video offers individuals the opportunity to communicate visually with anyone, at any time, using a wide range of personal and multi-party devices from any location. Ubiquitous video offers a truly integrated visual communication experience through supporting any audience using any device. It can scale from individuals through personal video to teams through conference and multipoint conference systems up to thousands of users over a network.

One has only to look at the increasing popularity of video instant messaging, Skype, YouTube and laptop video to see that the stage is set for more exciting change. With every new generation of technology, visual communications are becoming more powerful and lifelike. Today's high definition

video represents the pinnacle of communications technology and its superior life-like quality is a result of progress over decades. The visual landscape is teeming with a huge variety of technologies that are changing the way we as human beings interact and communicate – and according to those ‘in the know’ the pace of change and innovation in the realm of visual, shows no signs of abating.

The forces at play

Today, more people are used to video and expect to use it in their workplaces. Dimension Data’s chief technical officer for the Americas, Mark Slaga, explains that consumerisation of IT means that people are becoming more comfortable with video. “Visual communications solutions are being developed at a rapid rate and the market is constantly evolving. People are more widely distributed across geographical areas with fewer employees in physical offices and video is set to become the default communications tool for businesses across the world. As video evolves it will give people the ‘real-life’ equivalent of being face-to-face with anyone, anywhere and at any time”.

With video technologies moving into the mainstream, video communication is becoming a pervasive tool across organisations. It’s already being integrated into everyday communication tools and being merged with voice communication, instant messaging and presence applications. Slaga explains that video is becoming as easy to use as a telephone: “it is becoming a day-to-day tool which is easy to access, resulting in better adoption and utilisation and, ultimately, an increased return on investment for businesses”.

And it’s happening now. Slaga points out that video communications are becoming less of an ‘event’. Through improved quality and ease of use, business executives now use video as an everyday tool to support improved productivity. Dimension Data’s chief technical officer for Europe, Neil Louw, agrees that video quality today has improved to such a point that it is gaining more acceptance as a primary communications tool. “People will always need to meet face-to-face and enjoy interacting with each other. And through globalisation and the pace at which business takes place today, we see increasing acceptance of meeting virtually to achieve these aims”.

The changing face of communication – where to from here?

We have already moved well beyond a low definition video environment to one that is high definition and more lifelike, making it that much easier for people to want to use. Looking to the future, Louw maintains that science-fiction like concepts of holographic video are not far off either.

Within the workplace, we can expect to see positive change in a number of key areas in the next few years, thanks to the growing popularity and acceptance of ‘all things visual’: Traditional video conferencing is being transformed into tomorrow’s visual communication. Telepresence over IP is growing rapidly and is set to become even more high tech. In the near future, we can expect to see a complete move to IP and more use of desktop video for personal meetings. Better affordability and increasing bandwidth availability is driving new applications and a huge increase in adoption across the world.

Governments are already adopting the power of video to cut costs and deploy tele-justice, deliver webcasts of public meetings and, in disaster management, to relay vital images to control centres. Universities are harnessing video to deliver training to people across the world and will be able

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to interact with students in a virtual lecture theatre. Many companies are already broadcasting their annual results, and shareholder meetings of the future will allow for more interaction, questions and voting.

Looking ahead, we can expect more IP-based video to be used in marketing and training and the likelihood that a high percentage of product literature will have a video element. People will be able to 'attend' conferences in real-time or on recorded playback and more and more companies will look to IP multicasting to deliver the same video broadcast to multiple users.

What other developments are breaking on the visual communications horizon? We can expect to see aggressive adoption of video technologies in the healthcare industry, where, for instance, more medical specialists will turn to high definition video to consult on live surgeries in hospitals as well as to deliver remote counselling. Paramedics in the field will increasingly be able to communicate via video with medical specialists. IP video surveillance is also tipped to be a major growth area. According to Louw, much research and development is also going into mobile video and the management of devices.

As video quality continues to improve and people become more comfortable with video tools, companies will be able to change the way they do business. And through harnessing the power of visual communications in new and exciting ways, companies will not only be able to reap the benefits, but secure their place in an increasingly competitive marketplace.

Exciting new possibilities in collaboration

Visual communications is set to "boldly go where no one has gone before". The benefits they bring to the table include saved time and travel expenses and, more importantly, enhanced communication, faster turnaround of getting work done, and a growth in their sales. And we have only seen the tip of the iceberg... visual communications look set to continue to transform the communications landscape on multiple levels and their potential opens up exciting new possibilities in collaboration seems limitless. Video-

enabled processes and workflows promise the next jump in productivity gains.

Now more than ever, companies are letting technology do the legwork so their employees can have real-time, face-to-face meetings without ever having to leave their office. Louw believes video has the power to transform business and communications in the future: "While we may not be pushing the edge right now, video promises hugely exciting advances in every aspect of life through mass adoption of video as a general communications medium".

High definition

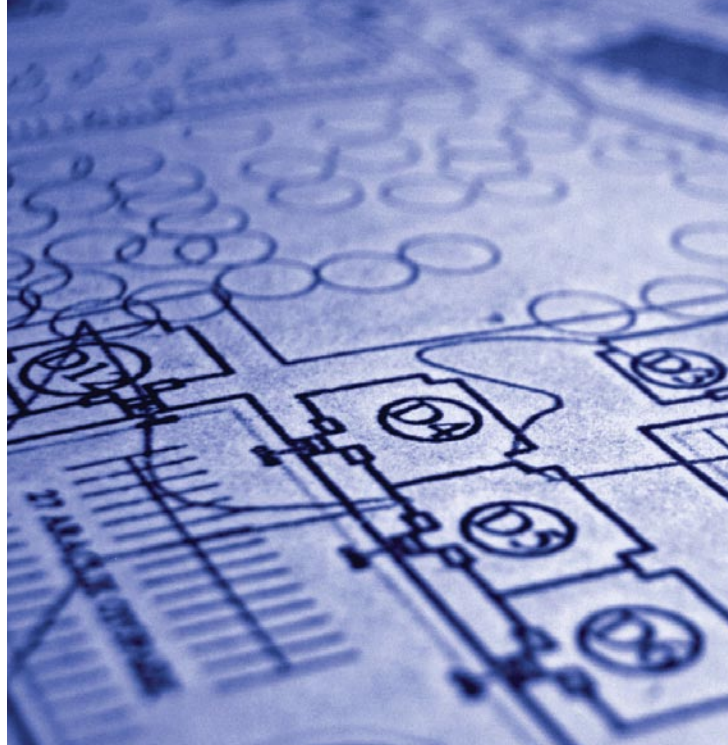
Through its superior quality and life like display, high definition (HD) video is enabling a whole new set of applications across multiple industries.

Telemedicine allows consulting physicians to participate in live surgery over video, while universities are bringing together research teams across the globe to share detailed diagrams and microscopic images. Telejustice is also a reality where courts are held in session using HD video. The clarity that HD provides is simply astounding. Added to this is a richer audio experience, providing the user with the experience of a face-to-face meeting.

While HD requires its own network today to meet its bandwidth requirements, unified communications is mixing HD video with traditional video, audio and desktop video into one experience while preserving the experience of each endpoint.

HD is easy to use and with its life-like visual and audio quality, it is revolutionising the quality of visual communications while still delivering cost advantages through reduced travel. What was the preserve of HD conference facilities is now coming as standard on laptops through HD webcams. As HD adoption increases, it is only a matter of time before it will become the communications standard.

A Blueprint for visual Architecture and operations considerations



As more businesses consider implementing new video communications solutions or enhancing their existing solution, important decisions must be made. Knowing what questions to ask, and what features are important in a video architecture, will pave the way to achieving an optimised, future-proofed visual communications infrastructure that delivers on business objectives. In this article, we consider some of the key steps involved in mapping out a visual communications 'blueprint' that will enable your organisation to unlock the myriad of benefits that these technologies have to offer.

Take a holistic, enterprise-wide approach

Organisations that implement thoughtfully-designed, well-implemented video communication solutions can look forward to significant cost savings and productivity gains. Success, however requires that you take a holistic, enterprise-wide approach to ensure that the needs of all

users are addressed and any integration issues managed. A rigorous assessment of your current technology set up is a precursor to optimising existing resources, mapping out an upgrade plan and selecting the right technologies.

The first important step in mapping a path for any visual solution is getting a clear view of what platforms your organisation currently uses. As unified communications consultant for Dimension Data in Germany, Tolga Erdogan, points out: "For organisations to increase the use of video and thereby reduce travel costs and speed up communication processes, it's vital to scrutinise the underlying IT architecture. Going IP for visual communications gives enterprises a whole new set of tools and possibilities, but at the same time may require more planning than traditional video conferencing. Another important consideration is how much integration is desired. Visual solutions can range from isolated video conferencing to fully integrated video communications".

For some companies it might be valid to keep traditional ISDN-based video conferencing systems, especially where regional IP WAN bandwidth costs are high. Modern visual

communications solutions should give organisations flexibility and freedom of choice when it comes to choosing the right infrastructure: ISDN, IP, or both. “Many organisations have existing installations of older equipment that still have value. Looking forward, your organisation needs to adopt the newest technologies and capabilities, and will need to manage, schedule and maintain both older and newer equipment in a blended environment”, notes Erdogan.

According to Erdogan, when reviewing their existing systems, businesses should also be sure to take an all-encompassing look at the rest of their unified communications infrastructure – including telephony and desktop applications like instant messaging and presence – with video as just another media channel in the mix. For example, how will you go about integrating a desktop-based video solution with a room-based conferencing system? What about bringing home-office users into the internal video conferencing system? The technology is there, the solution is ready – it is mainly a matter of selecting those that will scale according to your business requirements.

Selecting the right technologies is critical to the success of your visual communications endeavours. It is likely that your choice of manufacturer will be directly influenced by your existing or planned platform and the requirements for integration. To ensure that the visual communications infrastructure you deploy meets your business requirements, you may have to consider deploying point technologies from multiple manufacturers. For example, Cisco has a very holistic approach to visual communications, with video being just another type of media within their unified communications solution. In addition, Cisco is a pioneer in high definition (HD) video conferencing, bringing a whole new approach to video with their Cisco TelePresence solution. On the other hand, Tandberg has a long history in the area of video conferencing and offers a very specialised and capable end-to-end video solution. Tandberg is particularly strong in the integration space, whether it involves integration into traditional ISDN video networks or modern IP unified communications solutions. Also consider that Microsoft, another major force in the unified communications market, has a strong story in the area of desktop video conferencing and telephony, based around Microsoft Office Communicator and Office Communications Server.

Regardless of which manufacturer and technologies you select, it's critical to ensure that any solution you deploy is extendable and supports interoperability with other video solutions. Our experience is that organisations frequently enlist support and advice to help them assess their business and technical needs and choose a solution that fits.

When moving to IP, security should always be put under the spotlight. Security considerations associated with video over IP are very similar to those for voice over IP: How can you benefit from the flexibility and interoperability of IP networks whilst at the same time maintaining a high level of confidentiality? How can home office and mobile users easily integrate into an enterprise video network, preferably without using dedicated virtual private network (VPN) connections?

Additional challenges can arise when businesses choose to integrate two different IP networks with each other for business-to-business video conferencing. This introduces a host of new and complex issues – how can you communicate with another organisation without falling foul of your own security policies or theirs?

Erdogan advocates a prudent approach to security issues: “Decisions should be made in line with how organisations handle their overall security – your existing data or voice security policy, for example, will be an excellent baseline for defining a video security policy”.

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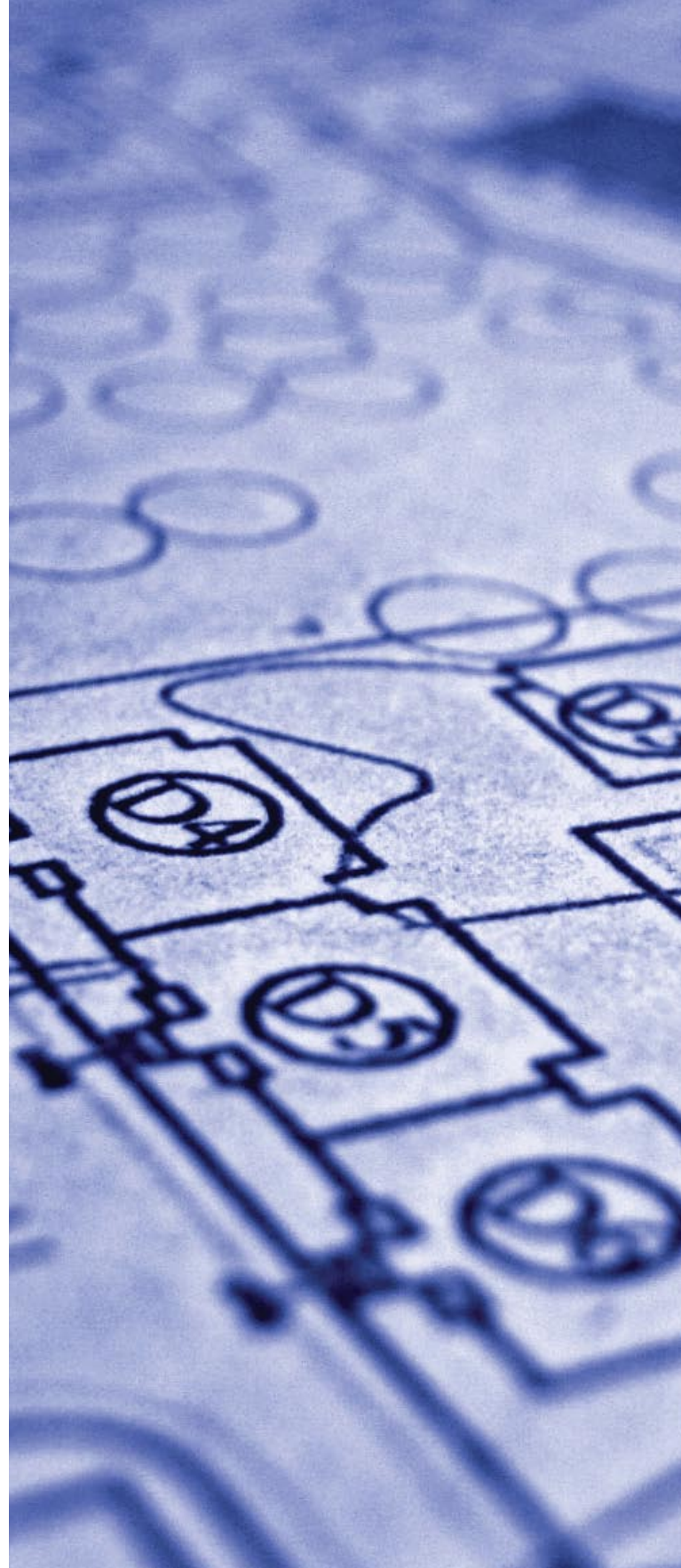
Operational considerations

There are a myriad of operational considerations to take into account when drafting your blueprint for video. These will include questions around legacy equipment, possible upgrades to support video over IP and a review of the underlying IP network infrastructure. You'll need to scope out your organisation's hosting, scheduling and security requirements as well as any policy adjustments you'll need to effect. Importantly, your roadmap should also include a thorough investigation of ways to optimise existing resources to support video. From a deployment perspective, be sure to adopt a phased and structured approach – where should video be deployed first? Where can video provide a quick return on investment in order to justify future investments?

Other operational considerations include looking at how video can better support the business and how it will impact business processes. Start by undertaking a thorough review of your current operational model. How is your network supported today and what are the merits of outsourcing certain functions? Where organisations feel ill-equipped to manage visual communications operations internally, outsourcing can be a sensible solution. By outsourcing to experts, organisations can focus on their core business by removing the headache of support, maintenance, installation and management of visual communications. Whatever the requirement, third parties such as Dimension Data can offer flexible solutions to support businesses with the added benefit of predictable spend.

In summary

As organisations of every size and function adopt video communication solutions, consideration must be given to the role video will play in daily processes and productivity, the planned scope of deployment, and the requirements these video solutions must meet in terms of current and anticipated user needs. Looking at your video architecture from an enterprise-wide perspective is essential, allowing you to plan for the ongoing needs of your organisation as you design video systems that are a best fit for your requirements. By keeping in mind some of the key challenges for the technology such as handling mixed ISDN and IP environments, security concerns and legacy and multi-vendor environment accommodation, decision-makers can make wise purchasing decisions that will ensure long-term performance and maximum ROI.





First things first

– Assessing your needs, setting priorities

Contemplating going down the visual communications path? Don't underestimate the importance of first having a comprehensive assessment framework in place.

Given the exponential growth in video (or visual) communications as a viable medium, companies are looking to harness its power and deliver real business value to their bottom line. But before making any investment in technology, it is critical to first understand your needs in order to choose a suitable solution. After all, we are operating in an economic climate that demands tangible proof of return on investment in video and decision-makers need to ensure that visual communications solutions form part of a wider converged communications strategy. Mapping out such a strategy requires a thorough assessment of business needs and priorities and careful planning to meet those requirements.

It's no secret that visual communications offer a host of benefits to companies. Delivering outcomes such as improved productivity, lower travel costs, improved levels of

customer service and 'green' benefits, there is little wonder that video solutions are so popular. Better use of resources means more efficiency for companies and the way staff work and interact with one other and their clients. These benefits are often easier to quantify and justify through a reduction in travel costs and, from a social perspective, companies are looking for ways to minimise their carbon footprint and show good corporate citizenship. Culturally, less time travelling can be an appealing option for many executives.

The challenges faced by legacy video systems included issues around cost, network limitations and poor quality output. Today's visual communications solutions offer a cheaper alternative across a better quality IP infrastructure with an impressive quality of service that doesn't disappoint. The improved ease of use and obvious cost advantages are driving organisations to take notice of the potential benefits to their business and the optimisation of their resources. Simply put, better collaboration and communication options enhance productivity.

While many legacy operational and quality issues surrounding video solutions may be a thing of the past, the real problem lies in rushed decisions. Having been enticed by the potential of the technology, organisations often neglect to think how their people work and how these solutions would support them.

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What's called for is a 'back to basics' approach. By learning from the mistakes of the past, companies need to first embark on a thorough assessment of their business needs, drivers and priorities before considering making any investment in technology.

It's a common scenario where, instead of taking a broad view of communications across the organisation, companies spend large amounts of money on high-end technology solutions and are then disappointed by the low adoption rate by staff. Careful analysis and more time planning means organisations are able to justify their spend on technology and, more importantly, ensure the solutions are used. There is a very real need for accountability and responsibility by organisations to prove a return on investment, especially in the current economic climate.

How do you meet?

The first step in establishing an organisation's needs is a thorough examination of its 'meeting fingerprint'. By understanding how user groups, clients and vendors meet and work together on a day to day basis, chief information officers can make an informed choice about how to optimise communication within the organisation.

Every organisation has a unique combination of face-to-face meetings, audio conferences, web collaboration and visual communications requirements. They also have unique user groups that use various means of communication across a host of different media. By grouping these user types, a clearer view emerges of their access to different types of media. "Through understanding how they interact and what media they use to communicate and collaborate, companies are better placed to optimise resource use and the processes supporting them," explains Gerard Florian, CTO for Dimension Data in Australia. "Many of our clients see value in choosing Dimension Data's 'How do you meet' assessment, which is designed to uncover the way an organisation communicates and collaborates. This assists the organisation to gain an understanding of how they can optimise their investment in visual communications technologies."

Assessing and matching needs

Understanding your organisation's unique meeting fingerprint is pivotal to the process of establishing your video needs.

How do you meet?

Follow these steps to build an overall picture of how people communicate and collaborate with one other within your organisation:

- List the communication user types that employees fall under, including their communication requirements, experiences and frequency.
- Define user groups and assign different user types to them.
- List the communication media that are available today.
- List and define the user profiles for each medium.
- Analyse the use of media in more detail, focusing on:
 - Asynchronous communication (such as email, intranet and recorded audio / video)
 - Real-time communication (such as web conferencing, telephony, audio conferencing, video conferencing and instant messaging)
- Examine how staff interact with clients and vendors

However large the investment, be it a high definition video solution or a simple desktop webcam, a thorough assessment will help you make sound decisions. It also gives organisations the opportunity to take a closer look at how business processes can be improved through enhanced collaboration, automated communication and face-to-face interactions.

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Building on a clear meeting framework, you can begin to examine specific video requirements in the following areas:

- Scope of equipment to be managed – what you have and what you'd like.
- Scheduling software – look at how meeting rooms are booked.
- Quality control – look at options for support staff and technical help on site.
- VIP support – look at specific support requirements for executives and their meetings.

This comprehensive assessment framework is critical to the successful deployment of a visual communications solution. Once you have a good understanding of the way your people work, you should prioritise those requirements on the basis of the needs of the business. It is simply not enough to map out the technical aspects and expect the solution to work without understanding the business processes first.

To gain a clear picture of the business requirements, processes and issues that are affected by video, you must be aware of the challenges you face today. This will help ensure they are addressed once the assessment has been done. For example, Dimension Data's Visual Needs Assessment service uses a carefully designed questionnaire to establish a high level view of the organisation, how it operates and communicates. This 'living' document is regularly reviewed and used to support the business in achieving its goals.

After gathering vital information about the operational requirements of the business, the next step is to define the solution requirements. Pilot testing, reviews and roll-out should then be strictly project managed to ensure your organisation can begin to reap the benefits of a video solution as soon as possible.

Planning with the future in mind

Building the business case for visual solutions and getting the resultant return on investment requires a holistic approach to the assessment and deployment process. Thorough analysis and planning must be backed up by robust training programmes and be integrated with business strategies and processes which are continually reviewed. Having a senior executive as a business sponsor to promote video to the rest of the organisation can also help ensure a good uptake.

Decisions on technology should never be reactive. Companies should think about video in the context of an overarching unified communications strategy. Though most organisations have strategies around applications and voice, many still don't even have a conferencing or visual communications strategy.

A thorough assessment coupled with a sound strategy will ensure you make the right decision for your environment. Technical requirements are obviously important, but must be integrated with specific business requirements and the priorities of the business. You need to understand how you use your equipment, how you can save money and why you are going visual.

As organisations look to video as the next step in improving communication, it is not, and can never be, the answer to everything. Executives will still need to travel to meet cultural expectations for face-to-face interactions. And, in some countries, bandwidth costs are still prohibitively expensive and don't yet offer a cheaper alternative to travel costs.

Visual communications offer an exciting future for businesses as their needs evolve to keep up with a rapidly changing world. The benefits are clear and as long as visual solutions are seen as part of a converged communications strategy, you can use the power of video to deliver value to the bottom line and an outstanding service to customers. This next step in the communications evolution requires thought, planning and a clear roadmap. And, if you can get these right, the sky is the limit – it's a chance to revolutionise your business and secure your position in a future marketplace.

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Communicating... Visually

Précis recently spoke to Tony Yortis – group manager for information systems at Sinclair Knight Merz about how visual communications is assisting employees to collaborate more efficiently, while simultaneously reducing the organisation’s environmental footprint.

We are a wholly employee-owned organisation that embraces shared values and an open culture.

Tell us a little about your organisation, Sinclair Knight Merz, and your role in the business?

Sinclair Knight Merz (SKM) is an engineering, sciences and project delivery firm with offices across Australia, New Zealand, Europe, the Middle East, South America and Asia. We work with clients in the public and private sectors, providing them with independent technical, strategic and commercial advice to deliver a wide range of projects. Our company operates across four broad markets: buildings and infrastructure; mining and metals; power and industry; and water and environment.

Currently, we employ around 6,500 people from a diverse range of disciplines including engineers, planners, architects, economists, scientists, project managers, technicians and administrative staff.

As group manager for information systems, I’m responsible for all matters ICT related, as well as the group’s project management office.

What were the key driving forces behind SKM's decision to 'go visual'?

We are a wholly employee-owned organisation that embraces shared values and an open culture. Our core objectives include empowering our employees to reach their full potential, engaging them in challenging and inspiring projects while still maintaining a healthy work-life balance. From a business perspective, we have a strong focus on service quality and safety along with a commitment to delivering a sustainable future and driving down environmental impacts through our technical studies and engineering designs. Our decision to pursue a visual communication strategy – which includes the establishment of virtual teams and the deployment of videoconferencing technologies – supports and aligns to these key strategic priorities.

Could you elaborate on your organisation's focus on sustainability and how visual communication is seen as an enabler of this strategy?

As a mentioned previously, SKM is committed to sustainability. To this end, we are acting decisively to reduce our environmental footprint and have set ourselves a target to reduce our carbon impact by 30% by 2011. As a global engineering organisation, we have skills located all over the world and when clients engage with us on new contracts, we must ensure that we position the most appropriately-skilled resources on the ground, wherever they are needed. Visual communications enables us not only to reduce our carbon footprint by reducing the need for corporate travel, but also to become more agile and reduce our time to market for new solutions and deployments. That's because it enables us to tap into skills and expertise that may be located on the other side of the world, at the click of a button. Additional benefits include a healthier work-life balance for our employees which in turn makes it easier for us to attract and retain high calibre resources.

So, opting into visual communications also supports another of our key business strategies, that of "Great People, Great Teams". We believe that if we invest in technology that enables employees to operate at their peak, and collaborate with one another better, they will stay motivated, happy and, consequently, will remain with our company for many years.

It sounds like every one of your organisation's stakeholder groups reaps the benefits of your visual communications strategy?

Yes, employees at all levels, in all roles are impacted positively. For example, as a privately-owned company, our most important stakeholders are our own employees. Historically, our executive team had to travel extensively to interface with individuals at our various locations around the globe, which was a drain in terms of cost, time and quality of life. Today, we conduct executive stakeholder briefings via videoconferencing. Our quarterly meetings with our global management teams are also conducted this way – this has proven hugely beneficial in terms of allowing these managers to balance their day-to-day responsibilities with the need to interact with one another on a regular basis.

Visual communications is also helping us to better communicate and collaborate with our clients. While the value of face-to-face meetings will never be negated, especially in the early stages of client engagement, once a strong relationship with a client has been established,

We believe that if we invest in technology that enables employees to operate at their peak, and collaborate with one another better, they will stay motivated, happy and, consequently, will remain with our company for many years.

Not everyone was comfortable using the technology – after all, visual communications requires a degree of behavioural change.

video communications offers a powerful tool to build on that relationship. It introduces an element of ‘human contact’ – being able to see the person with whom one is communicating with as opposed to simply hearing their voice, makes a difference.

Have you seen people’s behaviour change since the introduction of visual communications within the organisation? For instance, are individuals taking decisions more quickly?

Yes, although the adoption process can present a potential challenge. When we first introduced visual communications into our organisation, not everyone was comfortable using the technology – after all, visual communications requires a degree of behavioural change. However, our perseverance has paid off and today we conduct around 2,000 videoconferencing sessions every month! Our videoconferencing rooms are fully utilised and in fact we’re in the process of increasing the number of rooms in order to cope with the demand. The key to successful adoption of visual communications is ensuring that any initial ‘teething problems’ are ironed out in the early days – first impressions can be lasting. Adequate user training on how to operate the equipment as well as basic ‘VC etiquette’, are also very important.

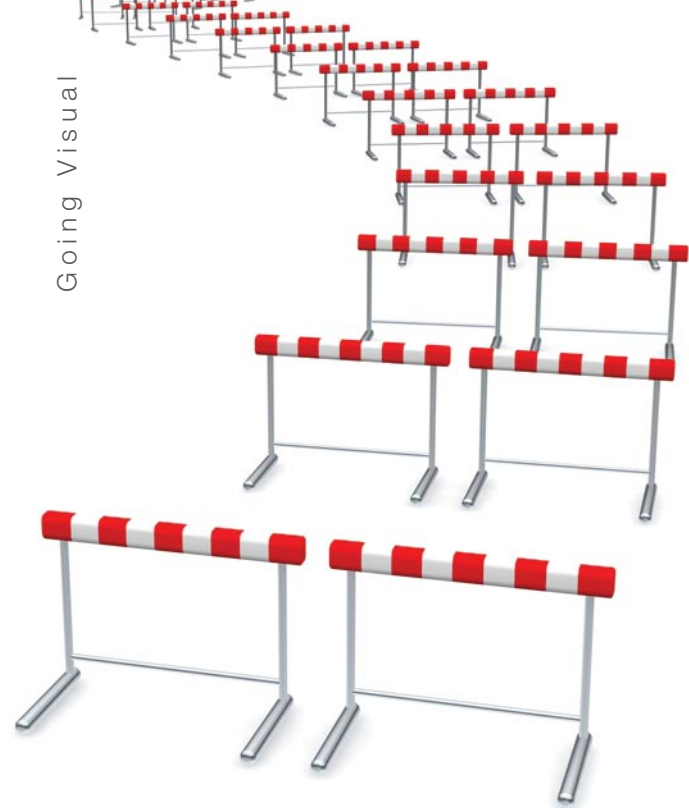
Last but not least, it’s essential to spend sufficient time at the outset getting stakeholder buy-in. Seamlessly deploying visual communication technology is only half the challenge – securing support at executive level will go a long way to facilitating the necessary behavioural change within the organisation.

What about potential technology-specific challenges? Do you have any peer advice for other organisations poised to embark on the visual communications journey?

Network bandwidth is probably the most critical issue. No matter how good your technology is, if your network is not properly synchronising the video and voice traffic, user frustration will quickly follow! Secondly, bear in mind that people will initially require a fair amount of hand-holding in the early stages, and some guidance around the ‘do’s and don’ts’ of presenting in a visual communications set-up, the use of the right fonts and formats, positioning of cameras, and so on. Be mindful that these seemingly small issues can determine whether an individual becomes a VC ambassador – or never uses it again!

So where to from here for SKM and its visual communications strategy?

Visual communications has proven itself to be a powerful business enabler for our organisation and we’ve seen return on our initial investment within the period of a year. We’re currently moving forward with a blended investment involving video conferencing, round-table rooms, as well as desktop webcams. We are also considering technologies that will enable collaboration in the creation of virtual engineering designs – in other words, people will be able to work on a document together from different locations around the globe, all in real-time. Given the nature of the work we do, this promises to be hugely beneficial, and will enable us to get even better connected with one another.



Clearing Adoption Hurdles

Strategies and tactics to ensure fast, wide-ranging adoption of video

With their potential to drive productivity and reduce travel costs, video communications solutions need to be adopted by as many users as possible to prove their worth.

When it comes to deploying video solutions today, organisations are looking to reap the benefits almost immediately. To maximise adoption rates we can use the past to inform the future and learn from the lessons of past video deployments to gain a useful insight into the way we should approach the roll out of video today.

Lessons from the past

It's hardly surprising that legacy video systems have such a bad track record. Video solutions of the past were technically complex and because of poor quality and numerous end user issues, adoption rates dropped and people began to revert to more tried and trusted forms of communication. Video was historically the domain of senior managers and directors, links and equipment were expensive and complicated to use and IT departments didn't want the ownership headache.

The implementation process was riddled with problems around bad communication and poor planning. Video solutions often ignored important scheduling factors, such as time zone differences and, when meetings didn't happen, users would simply blame the technology in frustration and avoid using video altogether.

A clearer, brighter future

Today's advances in technology, coupled with social and cultural trends across the globe, mean organisations are in a better position than ever before to harness the power of technology to gain a competitive advantage and reap the benefits of implementing video solutions.

Visual communication solutions offer a real return on investment to organisations through reduced travel costs and flipping the traditional training approach on its head. Companies are able to use the technology to communicate and deliver training face-to-face at a vastly reduced cost. As the culture of communication evolves, and demand for video continues to rise, businesses are noting a parallel increase in productivity as staff see video as a way to better utilise their time.

According to chief technical officer for Dimension Data in Australia, Gerard Florian, the number one rule for successful adoption is: make it easy to use. "Applying the people, process and technology rule to implementation, video should be as easy to use as a telephone with click-to-dial directories. Providing a seamless visual solution to users

means it is supported by a well designed infrastructure, the right processes and appropriate training. And there must be a buy-in from the top to ensure people use the technology”.

Coming at it from all angles

The biggest challenge without a doubt is how to make it easy to use for every user, regardless of their skill level. For Dimension Data’s vice president of IT in the Americas, Darren Augi, successful deployment of video solutions means tackling planning and roll-out from several different angles.

“An end-to-end approach to implementation of video solutions includes a thorough assessment of business needs to establish the technology requirements”. As a minimum, Augi suggests organisations follow these steps to implement video solutions in their business:

- Assess your technical capacity and business requirements
- Evaluate and optimise existing resources and prioritise video traffic
- Plan equipment and other network requirements
- Deliver a phased implementation of video across different user groups
- Provide basic user training
- Monitor usage, traffic and network traffic on an ongoing basis”

Common deployment challenges

In order to maximise adoption of the technology by users, we suggest organisations understand the common challenges when deploying video solutions. They include:

1. Network infrastructure

To support increasing video traffic across an already busy network, organisations must have a view of existing capacity and plan for any additional requirements. Extra care must be taken to ensure the underlying architecture is optimised to support calls and handle traffic and provide a reliable video solution. Organisations must balance access and use by ensuring sufficient availability while maximising utilisation of the video solutions to deliver a return on investment.

Video Etiquette

Basic user training should cover basic video etiquette. Users should be given guidance as to how to make and receive a call, use the directory, the mute button and the remote controls.

Here are a few basic video do’s and don’ts:

- DO pay attention to how your camera is set up – ensure the zoom is correct and your head appears in the middle of the screen
- DO arrive a few minutes early to allow for any unexpected delays or dialling issues
- DO try to maintain eye contact as you would in a face-to-face meeting
- DON’T read emails while people are talking
- DO pay attention
- DO use mute to reduce background noise when appropriate
- DO adjust your microphone settings
- DO test camera angles and sound to ensure a pleasurable experience for other people
- DON’T tap on your keyboard while other people are talking
- DON’T have conversations out of camera

2. Scheduling and directories

Resource scheduling will continue to be a challenge, and must be built into the architecture from the start. Core benefit of today’s visual communications solutions is that users don’t have to reserve rooms and can use video from their desktops and in virtual rooms. Click-to-dial directories are a vital component to video solutions. Whether they are room or desktop based, all users should have access to a single centralised directory at the click of a button.

3. Training and roll out

Training is essential. Although video solutions might be easy to use, individuals need specific training that matches to their needs. At the very minimum, a basic user training programme should be rolled out to all staff and could be delivered by video ‘champions’

across the organisation. Training programmes should address different maturity levels and skills and can include specific user as well as one-to-one training to deal with specific issues. Linking training programmes to professional development can help drive attendance and raise adoption rates.

4. Support

Choosing the right people to support video is very important. Traditional network support engineers may have the technical expertise to support the video environment, but may not have the correct people skills. Choosing a well-trained individual who cares about the detail will ensure users remain confident in the technology.

5. Monitoring

End user surveys can monitor usage and offer insight into the end user experience. A series of no more than three or four questions should cover whether the video call met their needs, whether it met with their expectations, and should be asked automatically after every meeting. While there's a temptation to add questions that measure cost savings, it may be better to monitor return on investment through other means, focusing the survey on end user perception.

6. Marketing

In addition to a launch campaign, organisations can use marketing to drive internal awareness of visual communications through regular messaging from CEOs to market the successes and good news on an ongoing basis. This means ensuring that high profile meetings go well and other staff members hear about it. Get creative based on your culture. Entice, encourage and make it fun and target every employee. Use prompts to remind people to consider video conferencing when they make travel bookings and ensure new training is promoted across the organisation that addresses new ways of working using video.

Driving adoption to embrace video

Video use is growing at a rapid rate across the world. Individuals are more familiar with video than ever before. Both Augi and Florian agree that while advances in technology have removed many of the technical issues around quality and performance, organisations must ensure they play their part in delivering solutions backed by sound processes, training and support. It is by aligning these factors with the technology itself that companies will see excellent adoption and usage and realise the full benefits on offer.

Choosing a well-trained individual who cares about the detail will ensure users remain confident in the technology.



Dimension Data goes visual

Dimension Data is no stranger to the issues surrounding adoption and uptake of video as an effective communications tool.

Enticed by the obviously attractive business case, Dimension Data's European operations decided to pursue visual communications and roll it out across the region. Dimension Data Europe's chief executive officer, Russell Bolan and chief operating officer, Andrew Coulsen explain how they tackled the challenges to achieve over 90% adoption of video across the region.

Bolan says the biggest hurdle to visual communication is behaviour and mindset. "After making the business case and decision to go the video route, we had to re-architect our own infrastructure and ensure we put a lot of effort into getting it right before rolling it out. Tight controls combined with a top down approach helped tackle the initial reluctance by some employees to use video".

According to Coulsen, the team spent the most time ensuring the end user experience was right. "We had a few battles on our hands making it user friendly, ensuring a reasonable quality, providing an easy to use directory and standardising the equipment and processes across geographies.

"Standardising the design of the directory system was really important and took about three months to get right. The directory system had to be logical and laid out in a hierarchical structure where users could search for other users by location or room and would even be able to drill down to an individual unit."

After getting the directory working smoothly, the team could begin influencing behaviours and affecting change by ensuring all staff had access to video and could use it easily.

Once networks have been laid down and the end points installed, Bolan and Coulsen agree the success to driving adoption lies in a few key areas:

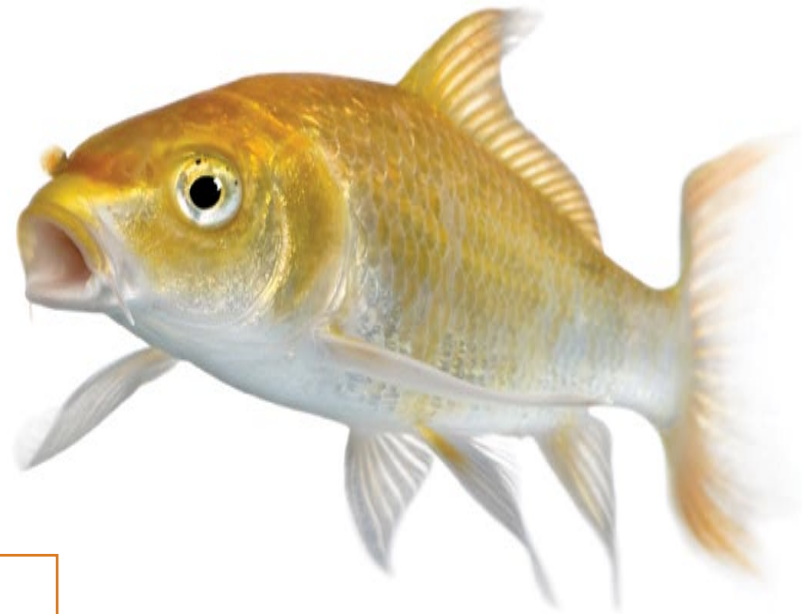
- Ensuring equipment is easy to use and controls are recognisable, for example, green button to call and red button to stop the call
- Controlling endpoints centrally thereby preventing users from being able to change the configuration on individual end units
- Involving people from across a pool of potential users from the start and selecting 'champions' to pilot test the solutions before rolling them out
- Driving the project from the top of the organisation and, as an example, linking the achievement of a reduction in travel costs to conditions of receiving bonuses
- Continual tracking of usage and measurement of actual cost base to prove the reduction in travel cost and resultant return on investment
- Providing the appropriate support staff to help users

Coulsen says the quality of communications has been dramatically improved internally and externally. "People are using video as their first choice for communicating with colleagues and clients. The added benefit to the well-being of our people is phenomenal and they are now getting more face time with their own teams and with clients". Meeting rooms are fully booked most of the time and, according to Bolan, their latest video conferencing project realised a return on investment in only two months.

Having achieved a 20% reduction in travel costs for the senior management team alone, both Coulsen and Bolan are convinced by the value that video can deliver. Whatever the reason for adopting video solutions, organisations will find even more to confirm that video is here to stay.

Bandwidth Hungry Video?

The impact of video on network performance



As multiple applications and more rich content vie for priority on already congested networks, organisations have to prepare for an explosion in the use of video.

Across the globe, video use is rising at a rapid rate and is unlikely to slow down. Organisations are faced with numerous challenges in how to optimise network performance and make the best use of existing resources to cope with the exponential growth in visual communications.

Current research shows video communications traffic will have increased tenfold in just five years. A recent Cisco report¹ states that 90% of all consumer traffic will be video based by 2013 and will be the sum of all forms of video (TV, video on demand, Internet, and peer to peer (P2P)). Internet video alone will account for over 60% of all consumer Internet traffic in five years.

Video is being used in more ways than ever before. Video conferencing, training, two-way, instant messaging (IM), telepresence and video entertainment are just some of the forms that have to be carried across networks. And because video is so susceptible to poor performance, and distortion is easily detected by users – thereby affecting both usability

and productivity – network performance is an important and urgent issue that has to be dealt with.

Depending on the type of traffic, be it desk or room video or telepresence, each has its own minimum performance requirements. This is compounded by the addition of more video traffic, for both conferencing and for rich-media such as training videos on intranet sites. Focusing on video conferencing, we know that it consumes at least four times as much bandwidth as voice. Next-generation conferencing (e.g. Cisco's TelePresence, HP's Halo, and LifeSize's High Definition Video Conferencing) consumes 200 times as much bandwidth as voice.

IT managers are faced with these challenges and others, such as limited bandwidth and high latency, and are having to manage application performance as more networks and their servers are centralised. As a result, users are increasingly further away in distance from their applications. These are the very reasons why organisations simply

¹ Cisco Visual Networking Index Forecast and Methodology 2008-2013 White Paper - June 2009

cannot afford to ignore the problem. Network performance optimisation is fast becoming an essential requirement for business survival.

Pressure on networks to evolve

What's important to realise is that the corporate or enterprise network is only part of the entire converged network. The idea of anyone connecting via any device from any location means there is an additional layer to networks, as users connect via their service providers through DSL or cable modem, through wireless (WiFi) when on the move and using GPRS, UMTS or 3G via their mobile operators². This extended network means organisations have to think about how they work with service providers beyond their own enterprise networks.

The boundary between company and private networks is also blurring and one is becoming an extension of the other. Users are effectively using applications and systems, other than those provided by corporate IT, and expecting to be able to use them on company networks. Consumerisation of IT means many employees are using free services and applications that are offered via the Internet to improve their productivity, for example, workers using IM and presence from MSN, where there is no corporate alternative. As video use grows, so does the pressure on this converged network.

From a technology perspective, this converged network has to cater for multiple technologies such as DSL, cable, various wireless technologies, ethernet (private and public), and optical among others. These technologies present new challenges for companies, especially around security, operational management, compliancy, risk, regulatory requirements and load management.

All of this traffic can have a visual component and each will have new and different characteristics that have to be provided for. With more real-time traffic, the network is under pressure to differentiate between these traffic types and prioritise accordingly.

The boundary between company and private networks is also blurring and one is becoming an extension of the other.

No time like the present

Enterprise network operations teams have to diligently plan and allocate resources and bandwidth to cope with the new demands by users for video on their networks. With bandwidth at a premium and the demand for more growing at a phenomenal rate (research suggests a 60% increase in business data traffic on the overall IP backbone over just one and a half years), organisations need to rethink wide area network (WAN) strategies and consider new architectures that supplement their existing networks.

Optimisation technologies can help. However, organisations need to adopt a structured approach to making investments in such technologies. Network performance optimisation tools will help speed up overall network performance, provide a good return on investment and will help network teams manage bandwidth better.

From a technical tools perspective, performance optimisation typically incorporates:

- 1) WAN optimisation technologies and
- 2) Application delivery technologies

WAN optimisation technologies manage bandwidth through better prioritisation and resource allocation. This involves

² DSL = digital subscriber line, GPRS = general packet radio service, UMTS = universal mobile telecommunications system

managing the different types of traffic by segmenting networks and prioritising traffic flow, for example placing video at first priority, voice at second, and a lower priority for recreational Internet traffic. They also speed up performance using a variety of techniques, such as compression, protocol optimisation and caching. WAN optimisation solutions provide an excellent return on investment of between seven and 12 months due to the huge reduction in bandwidth required and the user efficiencies that are gained, making it a very attractive investment in today's economy.

Application delivery controllers are placed in data centres and accelerate application traffic and improve application availability. These devices have become an important part of the data centre network by providing intelligent load balancing across multiple instances of an open application. By providing application level security features that other network security products cannot provide, they take on the intensive processing that would normally be done by application servers themselves, thereby allowing higher levels of server utilisation.

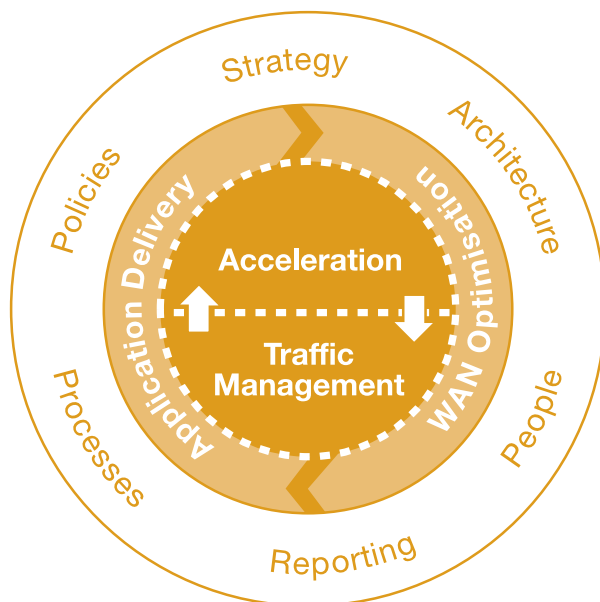
The right combination of network quality of service, WAN optimisation and application delivery technologies will enable the delivery of applications and real-time traffic to appropriately support the organisation's business.

Optimise your network for an optimal future

To dramatically increase the chances of success in optimising performance across the network, a structured approach to improving network performance is needed. As with any resource optimisation approach, it's important to consider establishing a capability that will effectively manage network performance over the longer term. This includes ensuring strategy, policies, architecture, processes, and people as well as reporting of network performance are effectively and consistently managed.

From the outset, ensure there is a clear understanding of the drivers for change and how they will affect the organisation's network. Following this, gain an understanding of the applications, protocols and traffic that is currently running on the network, that is, get some visibility into existing traffic patterns.

Once this has been established, it is easier to choose an approach that makes sense and supports the organisation's business and technology architecture. Successful approaches typically include a combination of controls and performance optimisation techniques to improve network performance. They also take an end-to-end view, which is critical to ensuring business continuity and cost optimisation. After implementation robust service level agreements (SLAs)



A performance optimisation approach should combine acceleration and traffic management and needs to be supported by appropriate operational management

are an important part of keeping network performance supporting the business.

View performance ahead of the game

The future is closer than we think. A future where almost any citizen of a developed nation will have access to the Internet and this reality will spread to give people in emerging countries the same access. Though mesh networks, people will stay connected all the time, using technologies such as peer-to-peer access and individual content sharing. This, added to the explosion in the use of visual communications

across these networks will mean that organisations have to optimise their network resources to stay ahead of the game.

In tackling the increase in video traffic and user expectations, organisations should look at optimisation as an opportunity to reinvent their business. Through better performance of their networks and resource optimisation, companies will be able to adopt enhanced communication technologies with confidence and prepare for an exciting future in a visual age.

Video Traffic on the Rise*

Global Internet Highlights

In 2013, the Internet will be nearly four times larger than it is in 2009. By year-end 2013, the equivalent of 10 billion DVDs will cross the Internet each month.

- Annual global IP traffic will exceed two-thirds of a zettabyte (667 exabytes) in four years.
- Global IP traffic will quintuple from 2008 to 2013.
- Overall, IP traffic will grow at a compound annual growth rate (CAGR) of 40 percent.

Global Video Highlights

Internet video now represents approximately a third of all consumer Internet traffic, not including the amount of video exchanged through P2P file sharing. The sum of all forms of video (TV, video on demand, Internet, and P2P) will account for over 91 percent of global consumer traffic by 2013. Internet video alone will account for over 60 percent of all consumer Internet traffic in 2013.

- **Video communications** traffic growth is accelerating. Though still a small fraction of overall Internet traffic, video over instant messaging and video calling are experiencing high growth. Video communications traffic will increase tenfold from 2008 to 2013.

- **Real-time video** is growing in importance. By 2013, Internet TV will be over four percent of consumer Internet traffic, and ambient video will be eight percent of consumer Internet traffic. Live TV has gained substantial ground in the past few years: globally, P2P TV is now slightly over seven percent of overall P2P traffic
- **Video-on-demand (VoD)** traffic will double every two years through 2013. Consumer IPTV and CATV traffic will grow at a 53 percent CAGR between 2008 and 2013, compared to a CAGR of 40 percent for consumer Internet traffic.
- **Mobile video:** almost 64 percent of the world's mobile data traffic will be video by 2013. Mobile video will grow at a CAGR of 150 percent between 2008 and 2013.

Demands on the Network**

Communications Type	Minimum Bandwidth	Acceptable Latency
Voice	20 – 100kbps	150ms
Desk video	128 – 384kbps	60 – 80ms
Room video	384kbps – 2mbps	60 – 80ms
TelePresence	10 – 20mbps	60 – 80ms
Call Centre application	2mbps	200ms

*Extracted from Cisco Visual Networking Index Forecast and Methodology 2008-2013 White Paper - June 2009.

** Source: Dimension Data Analysis

Visual Communications Deployments

– don't stumble at the final hurdle

Once you've thoroughly assessed your organisation's needs, and selected the right visual communications solution, making sure it's properly procured, shipped, installed, integrated, tested and operational – at the right place and in a timely fashion – is the critical next step.

In order to move forward with any visual communication investment with confidence, you need to be sure that the equipment is going to arrive where you want it, when you want it and that it is seamlessly integrated into your current environment. Given that visual communications deployments typically involve the installation of valuable equipment at multiple sites, frequently across a host of different geographies – potential challenges and pitfalls abound. And

in an economic climate that mandates that every cent associated with technology investments be accounted for, you need to be sure you can demonstrate return on investment as quickly as possible.

Careful planning and a forward-thinking approach to visual communications deployments is critical to ensuring you don't stumble at the final hurdle...

The scenario:

Multimed Pharmaceuticals*, a manufacturer of product ranges including personal care, household cleaning, laundry detergents, and prescription drugs, provides products and services to consumers in over 180 countries. Like many multi-national organisations, the company faced an ongoing and uphill battle to balance the need for regular executive-level communication and interaction with the spiralling cost of international travel, not to mention the negative impact rigorous travel schedules had on affected executives' quality of life. The company recognised the potential that visual communications – specifically, a Cisco TelePresence solution – could bring to bear, in terms of reducing travel expenses, enabling meetings to take place more frequently and fostering a healthy work-life balance.

* Multimed Pharmaceuticals is a fictitious client organisation, which is a composite of several of our clients.

The shipping and delivery of IT equipment to multiple geographies is fraught with potential risk including delays, customs holds and lost or damaged goods.

Having taken the decision to opt into telepresence, the next step was ensuring that the solution was deployed globally, in a risk and hassle free fashion, without delays and budget overruns. A tall order, given the fact that the deployment involved multiple geographies and therefore a host of different cultures, time zones, currencies and import regulations. Also significant was the ambitious rollout schedule – the installation of Cisco TelePresence System (CTS) 3000 and CTS 1000 units to 43 sites needed to be completed in less than ten months.

A number of rollout strategies were available to the IT organisation. Tackling the procurement and deployment of its infrastructure, using in-house resources was one option. Using a mix of in-country vendors to handle deployment at each individual site was another. Leveraging the expertise of a provider with global logistical capabilities and on the ground, in-country partners were a third alternative. With heightened executive and stakeholder expectations, the company needed to act quickly and decisively...

Although the issues faced by Multimed Pharmaceuticals may seem isolated and unique, they are representative of the broader questions and challenges that many of today's CIOs face such as managing critical multi-geography projects with limited staff, smaller budgets and fewer resources. Too often, the unfortunate result is projects that are late, over budget or fail to meet expectations.

What's more, multi-national organisations face unique challenges and complexity in the quoting, purchasing and

roll-out of global IT projects – often leading to extra expense and delayed implementation. How do you maintain the high level of visibility and control needed to manage IT procurement on a global basis while still driving economies of scale?

Right place, right time, right cost

With the fragile economy very much an ongoing reality, you can't afford project delays and budget overruns. It's estimated that international deployments impose two to three times the management load of national ones. Additional complexities and risks often de-rail international projects including finding the appropriate resources in specific geographies ... ensuring services are delivered with consistent quality ... importation and tax regulations ... not to mention a host of potential language and cultural issues. Getting equipment delivered, set-up and running in locations with barriers such as strict import regulations, government trade policies, or broadband limitations can significantly slow or even halt progress and expansion.

"The shipping and delivery of IT equipment to multiple geographies is fraught with potential risk including delays, customs holds and lost or damaged goods," explains Jeffrey Yauger, Dimension Data's director of managed services programmes for the Americas. "It typically takes three to four times longer to get equipment into countries like Venezuela and Russia than it does the United Kingdom, for example. That is why it's important to partner with a supplier that has expertise in the import and export of IT equipment into both established and emerging markets – so you can mitigate these risks."

For every order, you need to establish the optimal and most cost effective shipping mode and route, as well as provide optimum duty planning to ensure that your shipments are processed without delay, and the risk of penalties is alleviated. Maintaining visibility throughout the shipping and delivery process with real-time updates and tracking is another issue. All these factors play a critical role in ensuring that its order arrives safely at the final destination. You want a single source for up-to-the-minute status information for all of your orders and 24x7 access to order shipping and delivery status as well as electronic copies of all supporting documentation, such as proof of delivery.

According to Yauger, telepresence deployments can be particularly tricky, given the sheer physical size (not to mention the value) of the equipment being deployed. “A CTS 3000 TelePresence deployment at a single site typically involves 10 palletes piled high with boxes requiring a minimum 25’x25’x8’ footprint in a secure location! You can’t afford to have this equipment – which represents an investment of hundreds of thousands of dollars – standing around or, worse still, having to deal with a situation where the order is incomplete, the equipment is damaged, or it simply doesn’t arrive at all.”

When it comes to visual communications deployments, success lies in the planning, scheduling and logistics – the physical installation of the equipment itself is relatively straightforward. Before you can install a telepresence system, significant effort needs to go into preparing the room and ensuring it is properly remediated in line with the manufacturer’s specifications and that it is thoroughly ‘telepresence-ready’. After all, you are transmitting broadcast-quality video and thus factors such as the room’s paint colour, heating, cooling and sound-dampening systems all come into play. “There are a myriad of facilities-related considerations that need to be taken into account and appropriate measures taken upfront,” explain Yauger. “In fact, some manufacturers of visual communications technologies will usually not release the equipment to you, until they are satisfied that all room-readiness and network assessments have been successfully passed.” Of equal importance is network readiness. A painstaking review of every device along the network path that passes telepresence traffic is necessary to ensure a trouble free experience. “After inspection and any needed remediation of network devices, the elimination of congestion and jitter through careful application of QOS mechanisms and testing ensures that the network is ready to support telepresence traffic” explain Yauger.

Avoiding costly missteps associated with visual communications deployments calls for a global shipping and delivery approach that combines global procurement and logistics specialists, a client support team, an online track and trace system and partnerships with best-of-breed global carriers. With this multi-faceted approach, you have a better chance that your equipment will be delivered to the right place, at the right time and for the right cost.

“In fact, some manufacturers of visual communications technologies will usually not release the equipment to you, until they are satisfied that all room-readiness and network assessments have been successfully passed.”

The solution

Less than ten months after electing to deploy the Cisco TelePresence solution, Multimed Pharmaceuticals’ executives across 43 locations are enjoying regular real-time meetings at the click of a button and the company has slashed its travel budget by more than 40%. So, how did Multimed Pharmaceuticals successfully tackle the business challenges faced by the global visual communications deployment requirement? The company’s IT department realised that its key value and relevance came from a focus on developing innovative, high quality personal and healthcare products – not co-ordinating multi-geography telepresence deployments fraught with risk. Once this was known it was relatively quick and easy to decide how to address the deployment challenge. The company chose to work with a third party – Dimension Data.

Dimension Data not only ships visual communication equipment to over 140 countries worldwide, but we live and work in most of these emerging markets, with offices in Latin America, the Middle East and across Africa and Asia. Our on-the-ground presence in these countries makes us the IT partner of choice for organisations tasked with executing visual communications technology deployments that involve geographical sprawl.

Our involvement saved Multimed Pharmaceuticals time, gave the company access to a dedicated team who used the latest global procurement and logistics and track and trace tools, met their rollout deadlines, and – better yet – kept IT employees focused on strategic projects.

Case Study

Visual communications paves the way to effective delivery of justice

While many organisations focus on reducing executive travel, one US county has recognised the benefits of video through a unique opportunity to reduce the cost of transporting inmates to court. This has resulted in increased safety in the courthouse building and the effective delivery of justice through visual communications.

Client overview

Our client is a North American government department which provides a wide array of services and events that are as diverse as its resident population. With close to one million inhabitants, this 450-square-mile county has retained much of its rural character while adopting urban and suburban lifestyles, by virtue of its proximity to a major US capital city.

Business challenge

The county wanted to take a proactive approach to increasing safety and driving improved efficiency across the municipality. It was looking for a way to reduce the costs associated with transporting inmates to the courtroom, as well as to increase the safety within the town hall itself where many other departments are based. Correction Department Sergeant Donald Smith said it was difficult to move inmates around the building without the benefit of a secure holding area. “We were looking at a better way to facilitate the court proceedings through video conferencing, which would provide a safer environment and a more expedient way for the inmates to be seen without being physically moved to the courtroom.”

Quick Overview

- **Industry:** Local Government
- **Country:** North America
- **Challenge:** A local government county approached Dimension Data to find a way to reduce the expenses associated with transporting inmates to the courthouse building and increase overall safety within it.
- **Results:** Fuel and staff costs have been reduced and officers can be redeployed more productively. There is better overall safety in the courthouse building. The scalable solution can easily incorporate expansion to other courthouses in the county.

Our solution

Dimension Data worked with several partners to deliver a video solution in the court building. The electronic court appearance (ECA) solution was integrated into an existing IP network and allows individuals in the courthouse to physically view and interact with inmates in the county jail.

The courtroom’s video conferencing solution enables a prisoner in jail to see and hear the judge, the prosecuting council, defence council and any observers in the court at the same time. The video and audio are transmitted in high quality and full motion. A user can mute the audio transmitted to and from the courtroom and the equipment

controls (which include cameras, microphones, monitors and codecs) are easy to use.

The ECA solution includes an ID router, switch and multipoint video bridge. IP video connections between the court and jail are established through simple preset 'touch' buttons and once activated by a court administrator; the video bridge transparently creates the connections for the video session.

The system's foundation on an IP network means it has been built to be expandable and easily duplicated throughout other courtrooms and jails within the county, and will easily cope with the growth in demand for other video services required by the county court.

Dimension Data used its rigorous project management methodology, Primer*, to closely manage the project through every phase of its lifecycle. Through its assessment service, Dimension Data conducted a comprehensive review of the county's requirements upfront, in order to map out a detailed design of the system.

Before installing the solution, the team performed a comprehensive staging and systems test consisting of assembly, loading, system configuration and testing. Dimension Data collaborated closely with the county to architect the configuration and maintenance of the WAN infrastructure. Additional advisory support was provided to county's technical team with respect to the implementation of the WAN and LAN infrastructure.

The first part of the ECA solution involved installing four unobtrusive, wall-mounted, remotely controlled cameras in the courtroom. Cameras are pointed at the judge, prosecuting and defence councils and the gallery or overall courtroom. Each camera has preset programmes and a user can select either a multi-window image or maximise any of the four images to a single, full-screen image.

The solution includes an integrated video system and a single 46" LCD display monitor is wall mounted to allow the members in court to view the defendant and the media or evidence being presented.

Two touch panels are provided to facilitate viewing and system control. Sound is captured and transmitted in high quality using lapel and desktop wireless microphones, along with audio mixing, processing and echo-cancellation technologies to reduce noise and boost overall quality.

Adding value

Dimension Data's ECA solution has delivered a number of benefits to the county. The system allows for inmates to attend their general court appearances, conferences and state investigation hearings without having to leave the county jail building. This means costs are being reduced in terms of fuel, vehicle maintenance as well as personnel costs relating to drivers, guards and overtime pay for police staff. Furthermore, law enforcement officers' time can now be channelled into more productive activities.

The county accrues additional benefits in terms of increased safety within the courthouse building which houses other municipal departments. The video conferencing solution means inmates aren't regularly moving in and out of the building, which means a better level of personal safety for drivers and guards.

Through being scalable and integrated into the county's existing IP architecture, the ECA solution will easily allow for future deployments in other locations throughout the municipality area.

The team performed a comprehensive staging and systems test consisting of assembly, loading, system configuration and testing.

* Primer is Dimension Data's professional services engagement and delivery model, which combines the fundamental concepts of project management best practice methodologies including ISO 9000, PRINCE 2 and PMBOK, with our own experience.

Research Notes

NETWORK DEVICE CONFIGURATION UNDER THE SPOTLIGHT

Recent research reveals sobering statistics on the state of the average network from a configuration point of view.

Industry experts assert that most successful security breaches are a result of poor configurations. Consequently, configuration weaknesses can have significant risk implications for a business. The results of the Network Barometer Report launched recently by Dimension Data revealed some sobering statistics on the state of the average network from a configuration point of view. The findings show that authentication is the most frequently mis-configured category. In fact, authentication, access control list and TACACS+ errors make up half of all errors detected, and all relate to the security, not only of the device itself, but of the external systems protected by the access control lists.

For more information on the Dimension Data Network Barometer Report go to www.dimensiondata.com/networkbarometer

VIDEO COMMUNICATION HELPS GLOBAL TEAMS IMPROVE INDIVIDUAL AND CULTURAL COLLABORATION

Psychological study emphasises importance of visual cues to successful teamwork.

Video communication tools can boost openness and discussions in online meetings, leading to more creativity and faster decision making. According to a study recently published by Cisco, online meetings that use video to allow participants to see each other can help build stronger relational bonds and improve rapport between people. They can also help to reduce the effects of culture and personality clashes. However, video communication can heighten anxiety and self-consciousness, and businesses need to help employees develop the right skills to make the most of these tools. "Successful Video Communication", the study conducted by business psychologists Pearn Kandola, is the latest in a series of studies commissioned by Cisco into the psychology of business communication. How people

Furthermore, poor configuration can affect the availability and performance of important business applications and often leads to network downtime. For many organisations, network availability is of paramount importance, as IT failure can have severe fiscal ramifications that are unplanned and unbudgeted for. In addition to quantifiable loss, network failure can also lead to service disruption, employee frustration, uncertainty, reputational damage and brand erosion.

If configuration issues are affecting network and application availability, employee and technology productivity will suffer. Support costs are another important factor to consider. When configurations are not consistent throughout the enterprise, not only is there typically more network downtime, but mean-time-to-repair is longer as it is naturally harder to troubleshoot a set of devices that are all configured differently.

assess another person's trustworthiness is based largely on behaviour and body language, with the spoken word contributing only seven percent of a person's assessment, yet many businesses still rely on telephone and audio conferencing for team collaboration. This report explores how video communication can be used to improve business productivity in remote teams, and how psychological barriers to using these tools can be reduced.

"Video changes everything in business communication. It adds that vital visual dimension to help us really connect with our remote colleagues and collaborate effectively across geographic and organisational boundaries," says Nick Earle, senior vice president of Cisco Services, European Markets. "This latest Pearn Kandola study shows you how to extract the maximum benefit from every type of video communication and gives fresh insights into how 'visual networking' can help businesses take productivity to a new level."

For more information about this report, please visit: http://newsroom.cisco.com/dlls/2009/prod_012809.html

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