CommScope®

SPEED AND AGILITY. PERFORMANCE AND RELIABILITY.

A REPORT ON GLOBAL ENTERPRISE NETWORK TRENDS

SYSTIMAX®
SOLUTIONS

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INTRODUCTION AND METHODOLOGY

INTRODUCTION

OFTEN IT SEEMS DIFFICULT to justify the expense of building a high-speed network and cabling infrastructure. You believe it will increase performance, save time and make network users more productive. Productivity, however, is a difficult thing to quantify. How can you gather the information to support such a critical expenditure?

This report was created to help you in this quest, by providing detailed information on the global installed base of LAN technology, revealing users' intentions and priorities for upgrading their networks. This report is the result of a global study of network and IT managers, covering cabling types, network preferences, the impact of network downtime, the rate of moves, adds and changes and IT support requirements for managing, monitoring and auditing networks.

The report provides reliable information upon which to base infrastructure investment decisions; it also draws conclusions about the readiness of cabling infrastructure to support network traffic growth and other areas of ongoing cost to the business.

The report gives a clear picture of worldwide LAN connectivity trends across key industry sectors, helping you measure your own installations and upgrade intentions against peer groups and industry sectors.

Bandwidth and throughput are critical to a thriving enterprise, but so also are the systems and processes for managing and monitoring the network. The efficiency, productivity and reliability of the network are real currencies that fuel the successful business.

METHODOLOGY

IT PROFESSIONALS WERE INVITED to participate in the research via an Internet Web portal during 2006 using a questionnaire designed for clarity and simplicity. The questionnaire was available in 12 languages, enabling network and IT managers to respond in their preferred language.

The 1,484 Information Technology professionals who took part in the research were from a representative sample of IT users in 45 countries. They spanned organizations with between 50 and 10,000+ network users, in sectors ranging from education to finance/banking, and government to media/publishing.

Comparisons are made throughout this report with data gathered in previous SYSTIMAX® Solutions reports commissioned in 1994, 1998, 2002 and 2005.

SUMMARY OF KEY FINDINGS

NETWORK INFRASTRUCTURE TRENDS

SPEED INCREASING

Changes in the way organizations operate are generating demand for bandwidth-hungry applications, forcing data flow through the organization to be quicker and more efficient. Organizations are installing applications such as video conferencing, VoIP, CRM and other business management systems to make information easier to access and use.

■ Video conferencing, VoIP increasing

Video conferencing and collaborative working are on the increase. The report shows that IT administrators are accommodating these increasing application and bandwidth demands by migrating to higher speed Ethernet networks and higher performance cabling, in both the corporate backbone and to the desktop.

■ 10 Gigabit Ethernet growing; 100 Gigabit Ethernet cited

Adoption of high-speed LAN applications, such as Gigabit Ethernet and 10 Gigabit Ethernet, is growing; 100 Gigabit Ethernet is even cited as a requirement in the next five years.

INFRASTRUCTURE NEEDS GROWING TO MATCH

The associated cabling infrastructure is being upgraded to meet the impending bandwidth challenge and the performance exhibited by Category 6A copper and OM3 fiber cabling are a must for any forward-thinking user.

■ Category 5e cable becoming obsolete

■ Category 6 and Category 6A primary choices

With wide-scale proliferation of Gigabit Ethernet technology in the desktop environment, users are facing new challenges in providing 10 Gigabit options within the LAN. Category 5e cabling is moving towards obsolescence for new installations. Category 6 cabling has become the primary choice, with Category 6A cabling increasing in popularity as awareness grows and 10GBASE-T becomes a reality.

The report shows that although Category 6A solutions are more expensive, users concerned with factors such as downtime, productivity, network maintenance and support can benefit from the gains that Category 6A solutions bring in these areas, making them worth the investment when annualized over the life of the installation.

■ OM3 fiber use increasing in backbone

The same decision is being made for fiber optic cabling as users opt for the laser bandwidth of OM3 fiber or settle for standard OM1/2 multimode fiber or singlemode fiber. The backbone network presents the greatest opportunity for fiber in the LAN, and users are taking advantage of laser optimized multimode (OM3) fiber.

Due to the hierarchical nature of the LAN and the "funneling" effects of LAN switching, the "need for speed" clearly grows the further one gets from the desktop. The natural evolution for the business LAN over the next five years will involve a migration from switched 100 Mb/s; switched 1 Gb/s at the desktop; switched 10 Gb/s in the building backbone; and finally switched multi-Gb/s (even potentially 100 Gb/s) in the enterprise environment. The infrastructure portion will experience a similar migration, with high performance UTP as the horizontal medium, laser optimized multimode fiber in the building backbone as well as smaller campus, and singlemode fiber in the larger campus.

COST CUTTING CAN LEAD TO ADDITIONAL EXPENSE

■ Quality, performance, cost primary decision drivers

The decision factors considered by users continue to be dominated by quality, performance and cost. However, when evaluating cost, the report clearly shows that organizations whose primary focus is cost encounter additional expense in downtime, productivity loss and increased management time. Cost should be viewed in terms of investment over the life of the cabling, rather than only the initial installation cost.

NETWORK PERFORMANCE AND RELIABILITY

This and previous reports show that downtime has reduced over the last decade, as network and cabling performance have increased. This report again confirms that the use of higher performance copper and fiber cabling has a positive impact on network downtime.

The high cost of network downtime, in terms of lost access to data, impacted employee productivity, higher IT support costs and even lost revenue generation, means that network managers can look to recoup any extra cost in buying premium quality cabling solutions through network performance improvements. The report shows that these can vary by industry and geographic region, but all have potential to affect organizations' effectiveness.

■ Higher performance cabling improves network uptime

■ Network performance improvement offsets cost of quality cabling solutions

NETWORK SUPPORT, MANAGEMENT AND MONITORING

Although network speeds are increasing and downtime decreasing, the rate of moves, adds and changes (MACs) continues to grow. In addition, the time taken to manage, monitor and audit the network is a significant part of IT support resource allocation.

The increasing rate of MACs shows that users are becoming more mobile in where and how they work, but the report also alarmingly highlights the amount of assets moved unofficially or mislaid, and also the amount of moves that are performed incorrectly and need rework.

Across industries and geographic regions, despite differences in rates of MACs and time required for IT support functions, it is clear that where initial cost is the main decision factor, MACs and IT support are more onerous, forcing the ongoing costs of network support higher.

■ MAC rates continue to increase

■ Alarming number of assets moved unofficially, mislaid or need rework

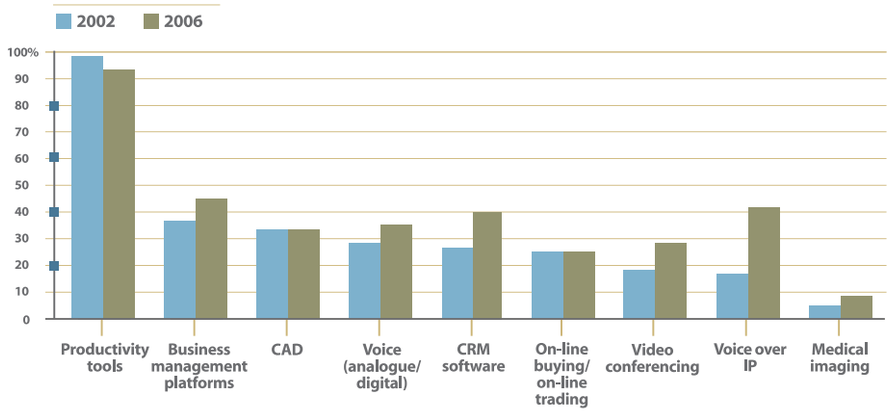
■ Cost focus leads to increased network support expense

NETWORK INFRASTRUCTURE TRENDS

AS USERS DEMAND more robust applications, the speed and bandwidth requirements of network connections and their related cabling continue to increase, leading to acceptance of, and investment in, faster networking technologies. These investment choices continue to be made on the basis of product quality, initial cost and technical performance.

APPLICATIONS USED ON THE DESKTOP

2002 vs. 2006

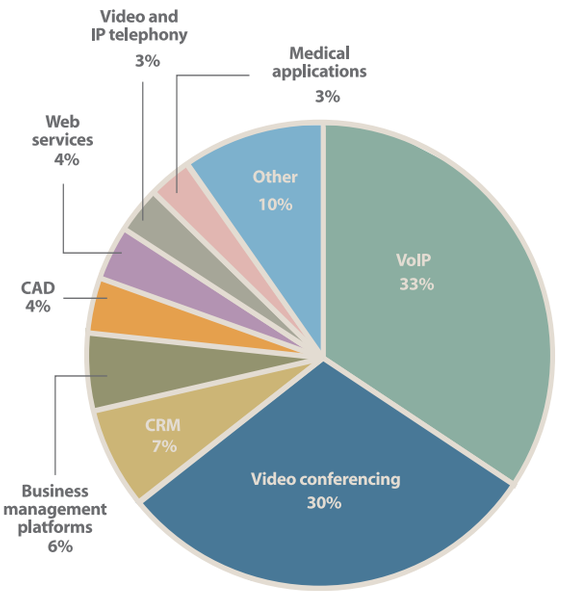


Productivity tools (e.g., e-mail, word processing, spreadsheets, presentation software and Web browsers) are currently used more than any other application.

Since 2002, there has been a significant increase in the number of VoIP users, climbing from 17% in 2002 to 43% in 2006. In addition, other productivity applications, such as CRM and video conferencing, are growing markedly.

In 2002, 27% of respondents predicted that video conferencing would be an application used by their employees in the future. This figure fell closely in line with the 2006 survey, where 29% of respondents reported video conferencing as an application currently accessed by employees.

FUTURE



Looking into the future, VoIP and video conferencing are predicted to be the most-used applications.

100 Mb/s Ethernet is the predominant horizontal connection installed globally, at 62% of the horizontal connections installed today. However, only 12% of users plan on selecting 100 Mb/s Ethernet for future installations over the next five years.

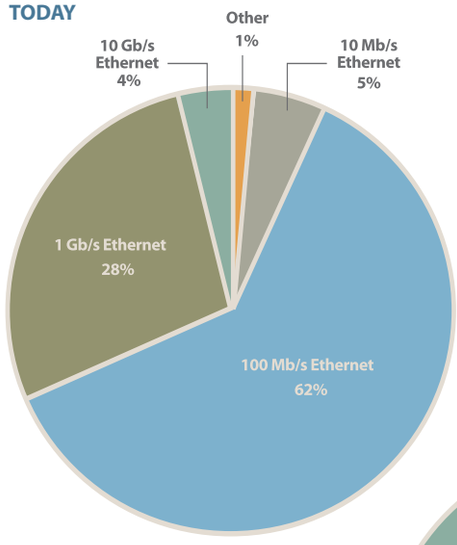
Majority of users (53%) plan on using 1 Gb/s Ethernet in future installations of horizontal connections.

10 Gb/s Ethernet is expected to increase from 4% to 29%.

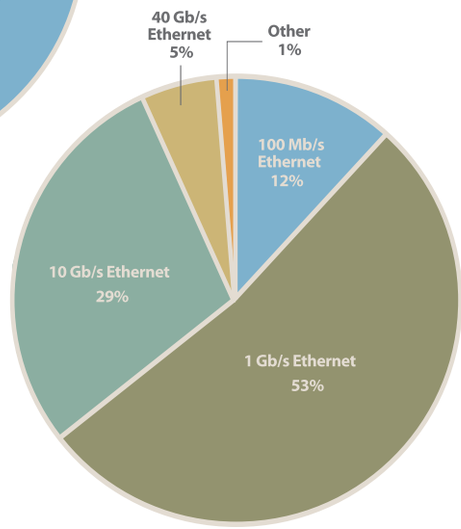
As one would expect, there is a correlation between those using higher speed networks and those using higher performance cabling.

HORIZONTAL CONNECTIONS, GLOBAL

TODAY



5 YEARS

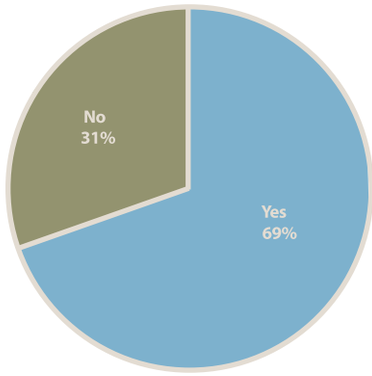


Just under 70% of users are aware that the 10GBASE-T standard has been ratified by IEEE.

Awareness level is highest among NAR participants at 83%, and lowest in APAC and CALA at 61% and 56%, respectively.

10GBASE-T STANDARD

AWARE THAT 10GBASE-T STANDARD WAS RATIFIED BY IEEE, GLOBAL

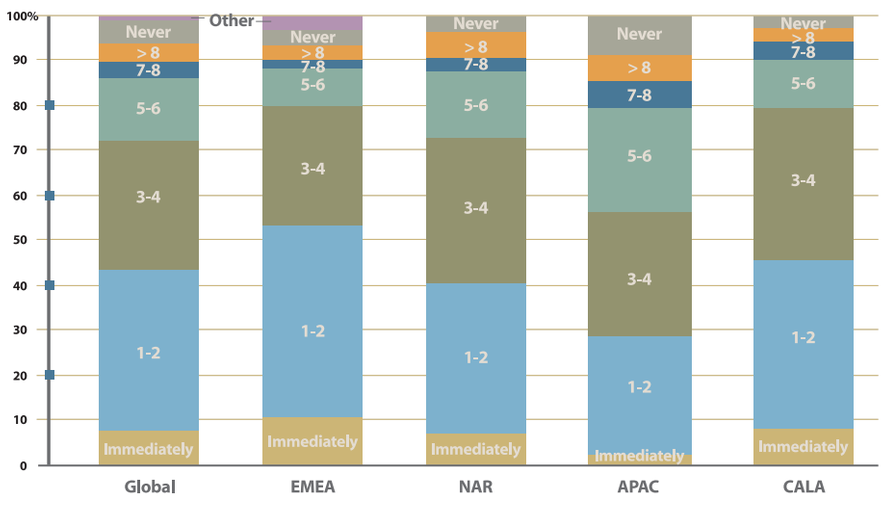


Globally, 43% of users expect to deploy 10GBASE-T standard electronics over the next 2 years.

Over half of EMEA users (53%) expect to deploy 10GBASE-T standard electronics over the next two years, followed by CALA users at 46%.

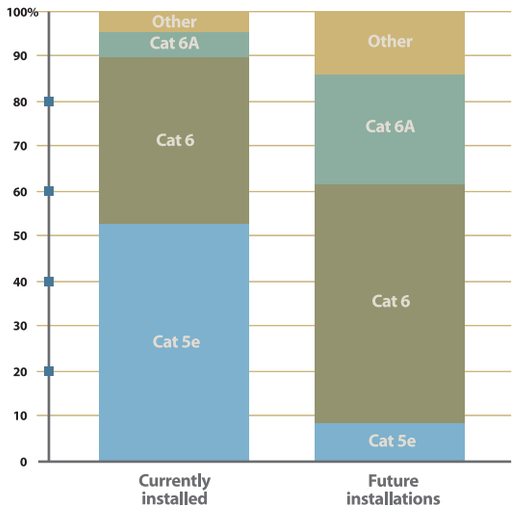
APAC is expected to be the slowest to adopt 10GBASE-T.

10GBASE-T DEPLOYMENT PLANS, IN YEARS



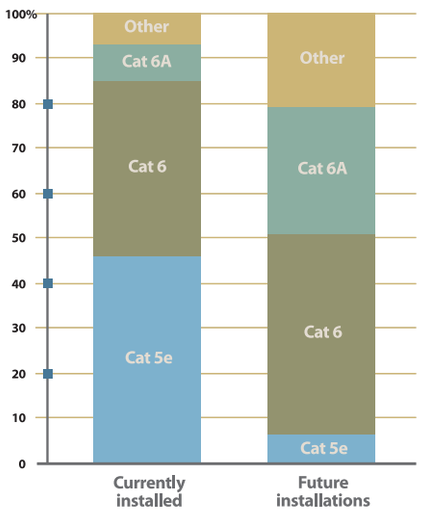
COPPER CABLING USAGE

GLOBAL

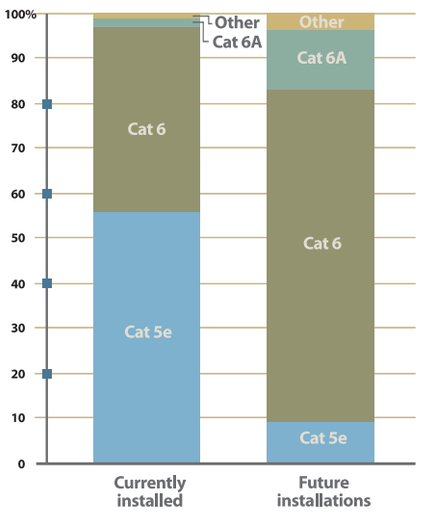


REGIONAL

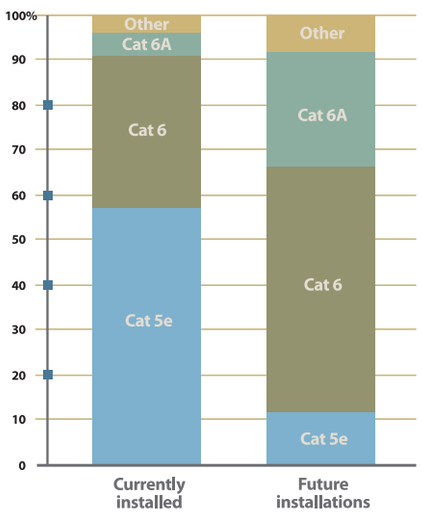
EMEA



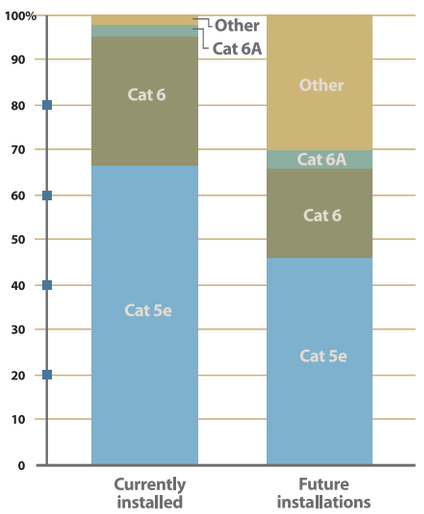
APAC



NAR



CALA



Participants expect Category 5e to drop from its current installed base of 53% to just under 9% of new installations. This is a further indication of Category 5e moving to obsolescence, as it is a sharp drop from 2005 when 17% said they would install Category 5e.

Category 6 is expected to increase from an installed base of 37% to 53% of new installations. It has already increased from the 28% of installed base reported in 2002.

Category 6A is increasing from an installed base of 5% to 25% of new installations. Again, this is an increase compared to the 17% reporting they were looking to adopt Category 6A in 2005. Largest adopters are in the Finance and Technology sectors.

The "Other" cabling option, which includes Coax, Category 3, 5 and 7 cabling, has remained relatively constant compared to the 2005 survey data.

The largest geographic markets for Category 6A are EMEA and NAR. Approximately a quarter of EMEA (28%) and NAR (25%) participants would install Category 6A.

CALA participants believe Category 5e will remain strong in their region, representing 46% of new installations. CALA will be the only market where Category 5e still dominates.

1 Gb/s Ethernet is the predominant backbone connection installed today, at 60% of participants. However, only 15% of users plan on installing 1 Gb/s Ethernet in the backbone in the future.

Majority of users plan on installing 10 Gb/s Ethernet in their backbone in the future, rising from 16% installed today to 51% in five years.

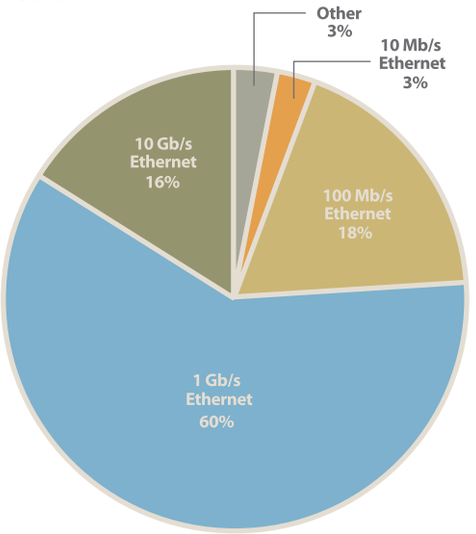
100 Mb/s Ethernet in the backbone is expected to drop from 18% to 3% by 2011.

Users expect 100 Gb/s Ethernet to represent 15% of installations by 2011 for backbone connections.

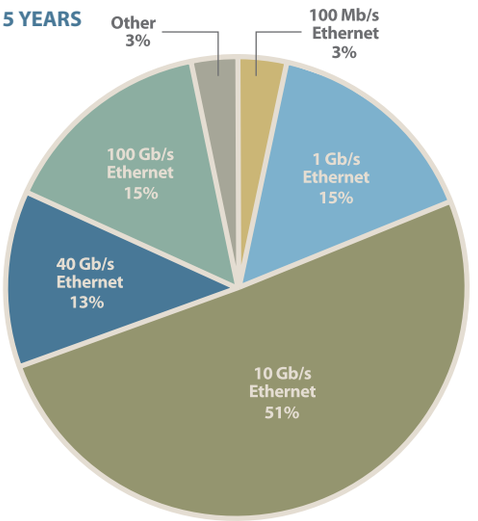
Again, there is a correlation between those using higher speed networks and those using higher performance cabling.

BACKBONE CONNECTIONS, GLOBAL

TODAY

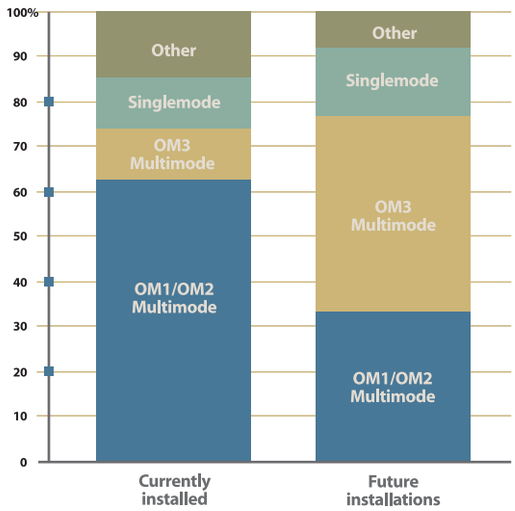


5 YEARS



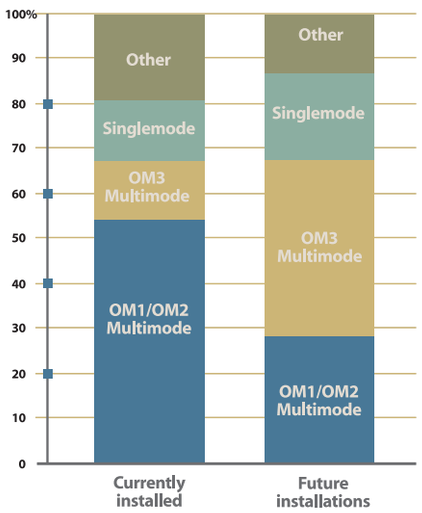
FIBER OPTIC CABLING USAGE

GLOBAL

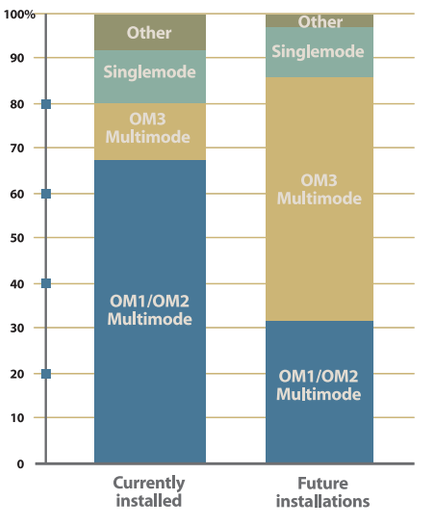


REGIONAL

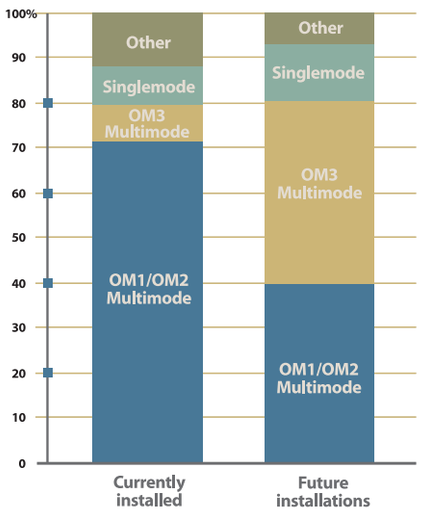
EMEA



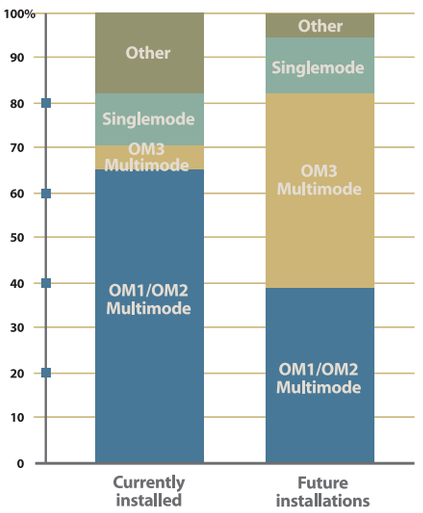
APAC



NAR



CALA



Overall, OM1/OM2 Multimode Fiber is currently installed by the majority of users (63%). OM1/OM2 Multimode Fiber is expected to drop almost in half, to 34% of new installations.

OM3 is expected to be the dominant fiber, growing from the current installed base of 11% today to 43% of new installations. Comparing to the 1998 and 2002 reports, this shows the increase in usage of this fiber type, and matches the increase in networking speeds in the backbone. In 1998, 4.4% intended to install OM3 fiber; in 2002 it had grown to 28%; now it is at 43%.

OM3 is predicted to be the dominant fiber in all regions.

The dominance of OM3 is expected to be most significant in APAC.

Product quality is the single most important factor companies consider when making a cabling investment choice.

This is consistent with the results found in 2002. It is also noticeable that those who are concerned mostly with initial cost have lower performance networks, and, as seen in the next section, also have more downtime and network issues.

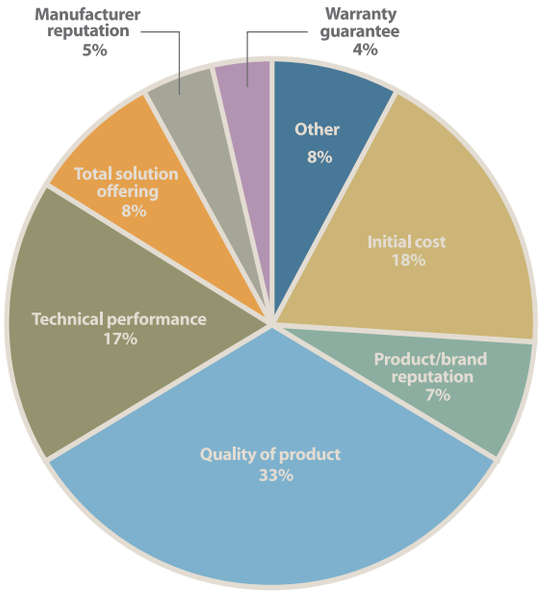
Companies using higher performance cabling have a higher regard for quality, total solution and performance in their selection.

Quality is the single most important factor for all regions except APAC. Initial cost is the main driver for APAC companies, closely followed by product quality.

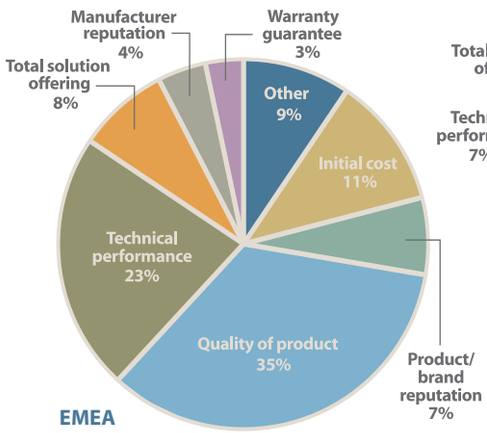
DECISION DRIVERS

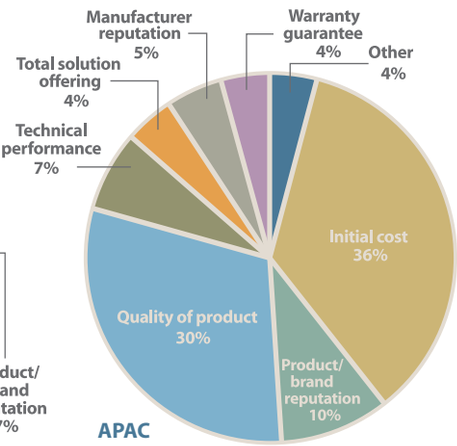
SINGLE MOST IMPORTANT FACTOR IN CABLING INVESTMENT CHOICE

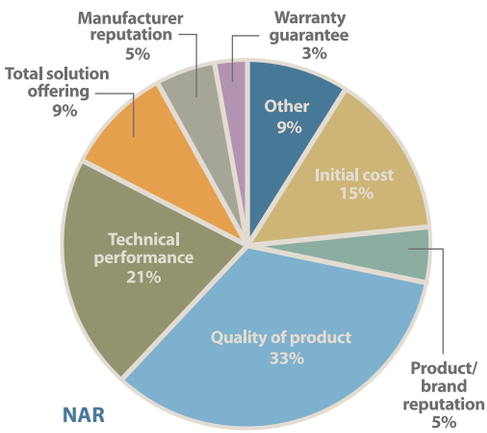
GLOBAL

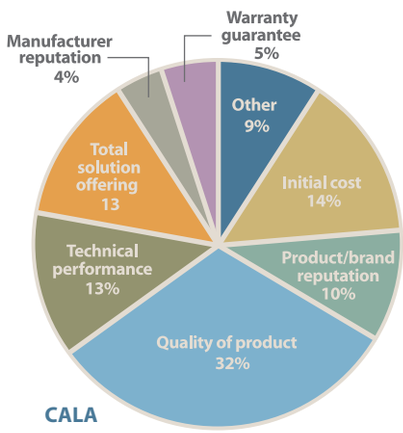


REGIONAL

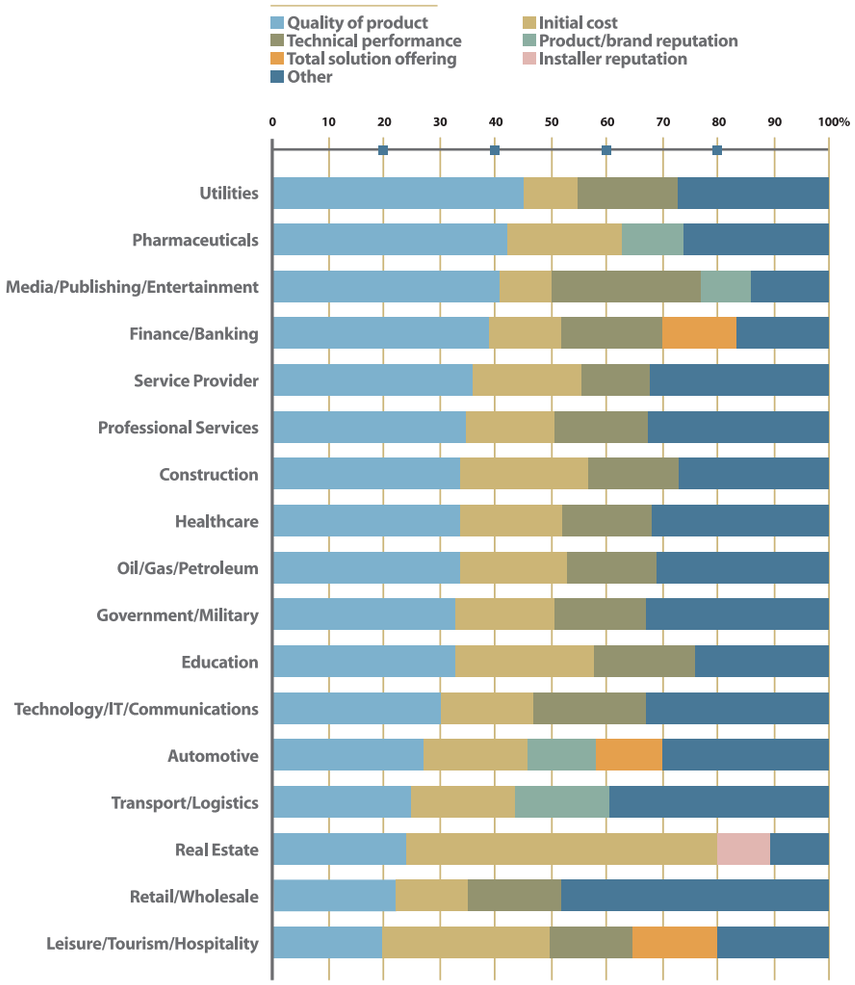








DECISION DRIVERS
BY INDUSTRY



Quality of product is the top decision driver for most industries.

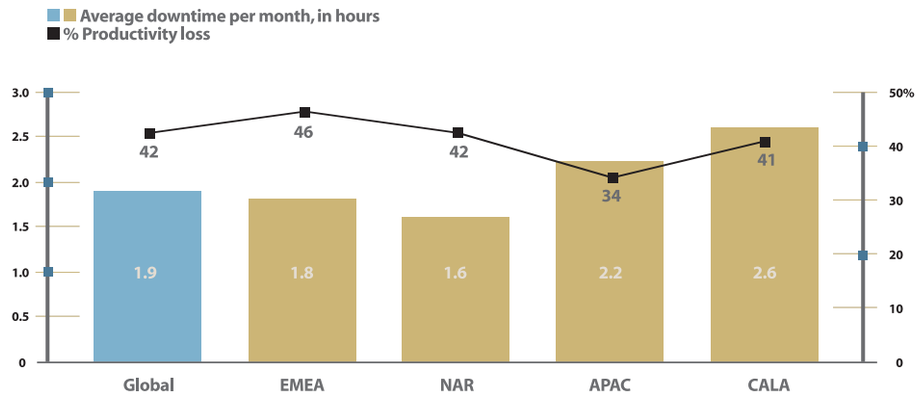
Initial cost was the primary decision driver for over half of participants in the Real Estate industry.

NETWORK PERFORMANCE AND RELIABILITY

AS MORE AND MORE EMPLOYEES depend on the company network, the impact of downtime on productivity loss, and ultimately on corporate costs, becomes an increasingly serious issue. While improved, LAN connectivity problems and subsequent downtime still show the benefits of high quality and faster infrastructure.

LAN DOWNTIME

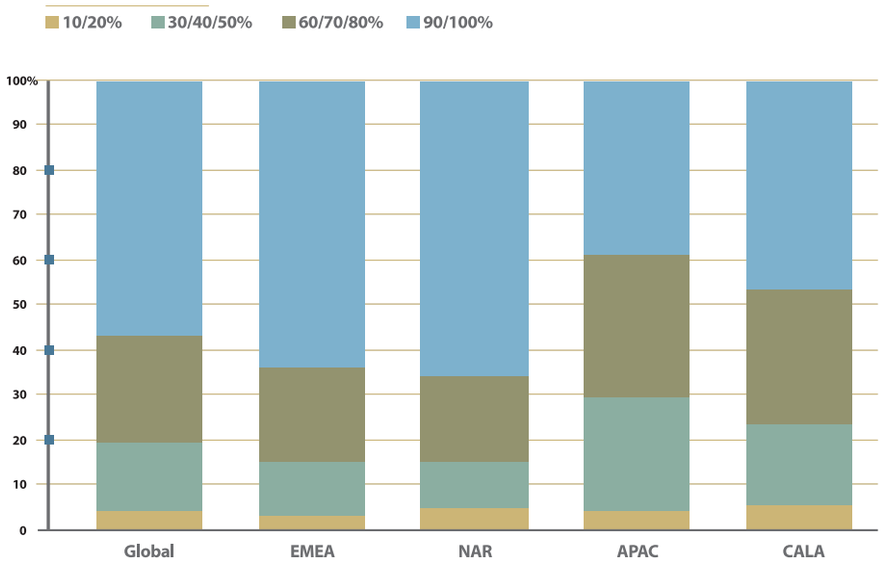
DOWNTIME AND PRODUCTIVITY LOSS



Globally, users reported a decline in the average downtime over the last eight years, with the respondents reporting on average 3.2 hours in 1998; the majority reporting approximately 2.5 hours in 2002; reducing to an average of 1.9 hours in 2006.

APAC and CALA users reported higher downtime hours/month.

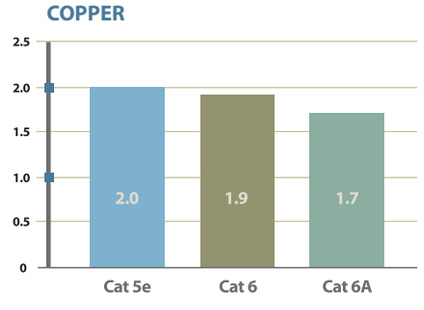
PERCENTAGE OF EMPLOYEES WHO USE THE COMPANY NETWORK



Downtime has less impact on the productivity of APAC workers. This could be related to employee dependence on the company network. APAC companies have less employees using the company network – only 39% of the APAC companies reported that 90/100% of their employees use the company network, compared with 64% in EMEA and 66% in NAR.

AVERAGE HOURS PER MONTH NETWORK IS DOWN OR PERFORMANCE IS DEGRADED/SLOW

COPPER



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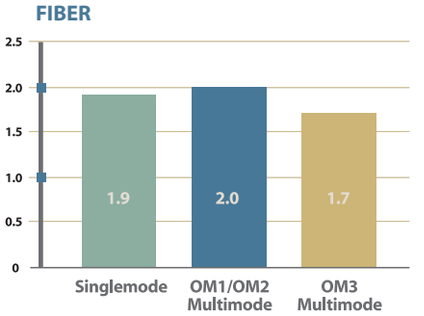


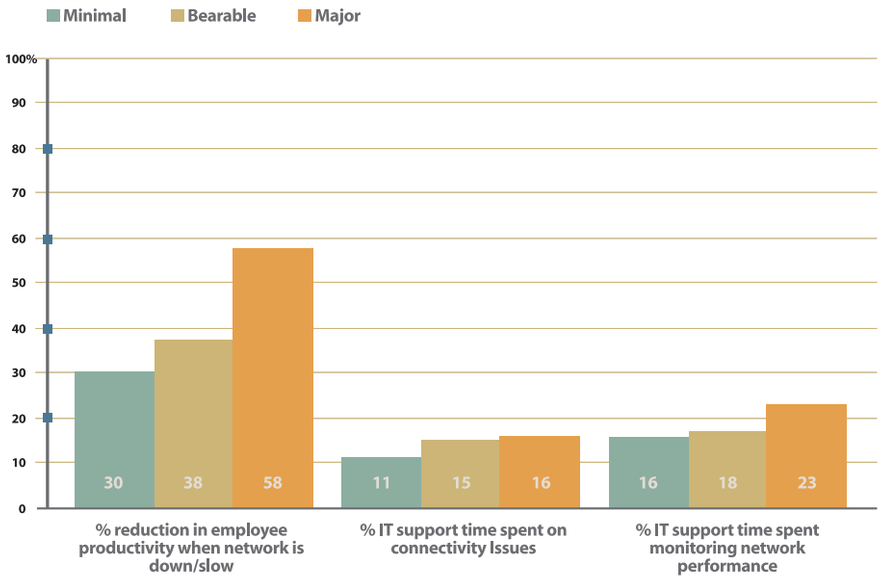
Companies that have deployed higher performance cabling tended to have a lower average downtime.

In addition, those companies where initial cost was a dominant factor experienced more downtime, highlighting the need to consider total cost of ownership, including ongoing costs.

Participants reporting that downtime had a major impact on their business had significantly greater productivity loss for each hour of downtime and also spent more time monitoring network performance and addressing connectivity issues.

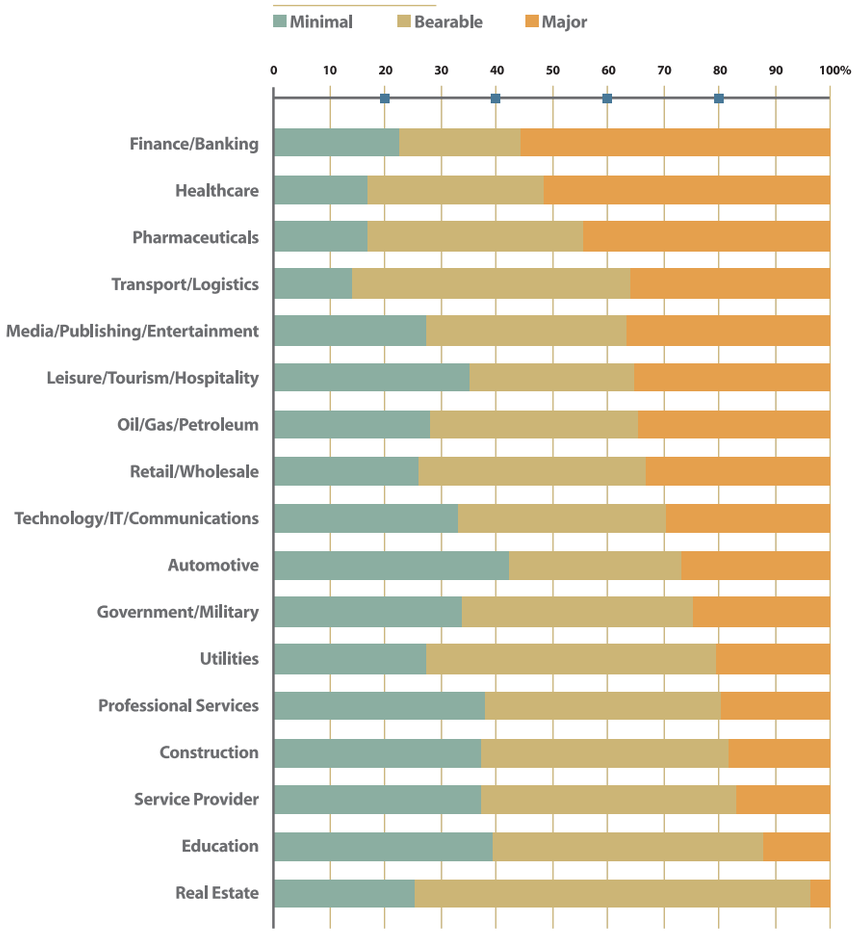
LAN DOWNTIME

COST IMPACT OF DOWNTIME



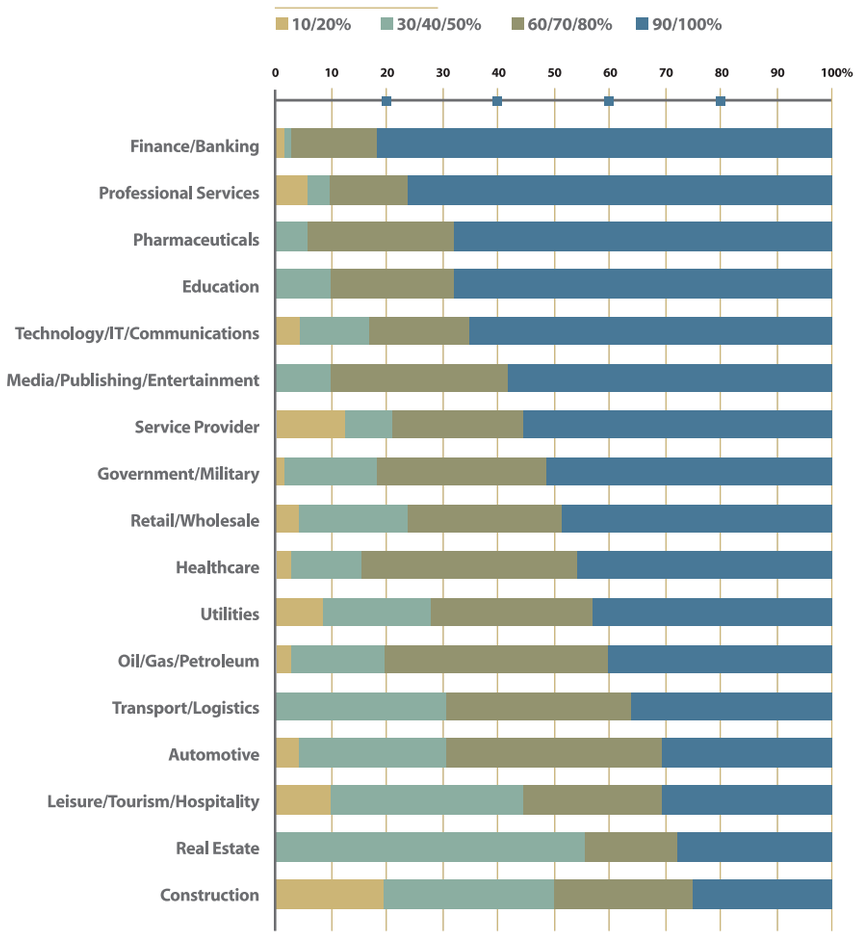
Downtime has a greater cost impact in the Finance/ Banking and Healthcare industries. Over 50% of participants in these industries stated that downtime had a major impact on their business.

COST IMPACT OF DOWNTIME, BY INDUSTRY



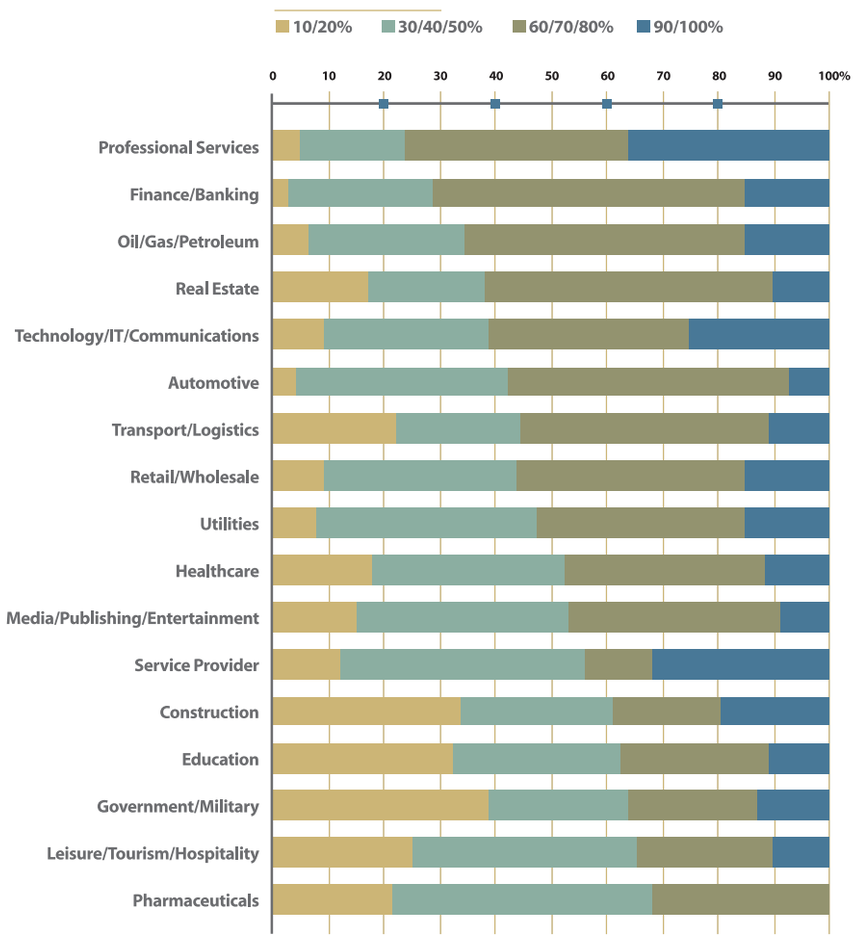
LAN DOWNTIME

PERCENTAGE OF EMPLOYEES WHO USE THE COMPANY NETWORK, BY INDUSTRY



One reason for the high cost impact of downtime for the Finance/Banking industry is the large percentage of employees that use the company network. Over 80% of Finance/Banking participants stated that 90/100% of their employees use the company network.

PERCENTAGE OF EMPLOYEES GENERATING REVENUE FOR THE COMPANY, BY INDUSTRY

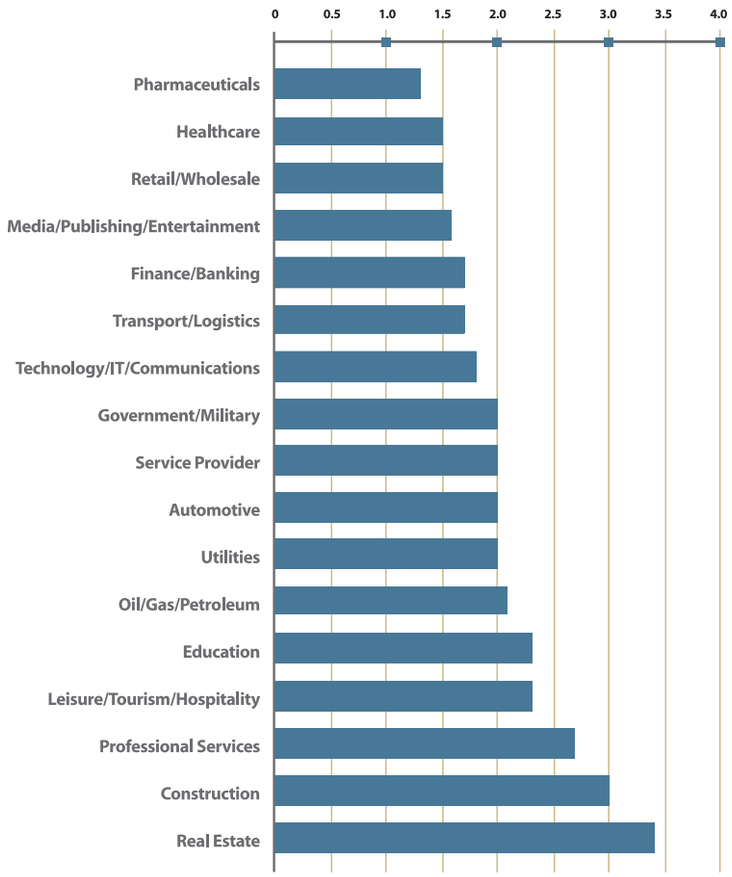


Finance/Banking, along with Professional Services, also have a large percentage of their employees generating revenue for the company. With over 80% of Finance/Banking employees on the network and a high percentage of these employees generating revenue, every minute of downtime has a significant financial impact on Finance/Banking companies.

Professional Services, Construction and Real Estate industries reported the highest downtime hours per month. With a large percentage of employees on the network and a high percentage of employees that generate revenue, downtime can have a significant impact on Professional Services companies. The impact is not as significant for the Construction and Real Estate industries since a smaller percentage of employees use the company network.

LAN DOWNTIME

AVERAGE HOURS PER MONTH NETWORK IS DOWN OR PERFORMANCE IS DEGRADED/SLOW BY INDUSTRY

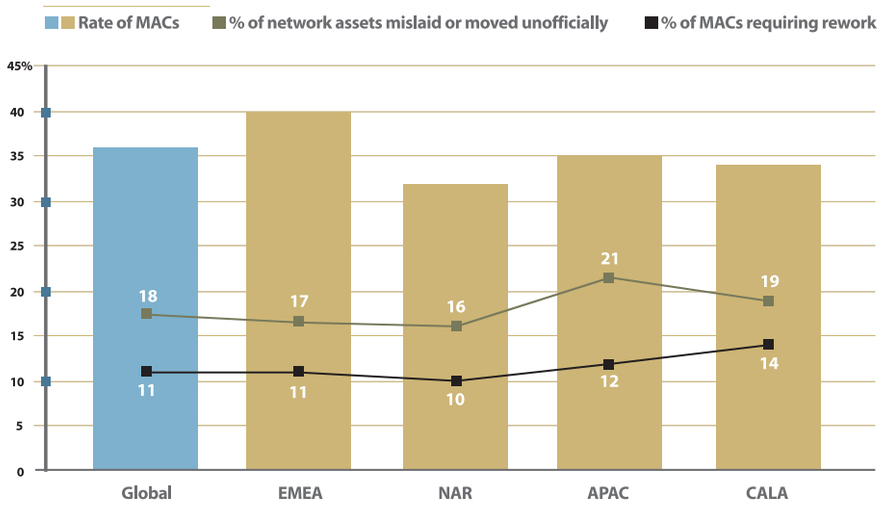


NETWORK SUPPORT, MANAGEMENT AND MONITORING

TECHNOLOGY USERS ARE BECOMING MORE mobile, causing moves, adds and changes to take an ever-more increasing amount of IT professionals' time. Also vying for network support hours is the time spent dealing with a surprising number of unauthorized or incorrect MACs. Where initial cost is the primary decision driver for purchasing networking technology, these problems are more pronounced.

MOVES, ADDS AND CHANGES

MAC RATES, BY REGION

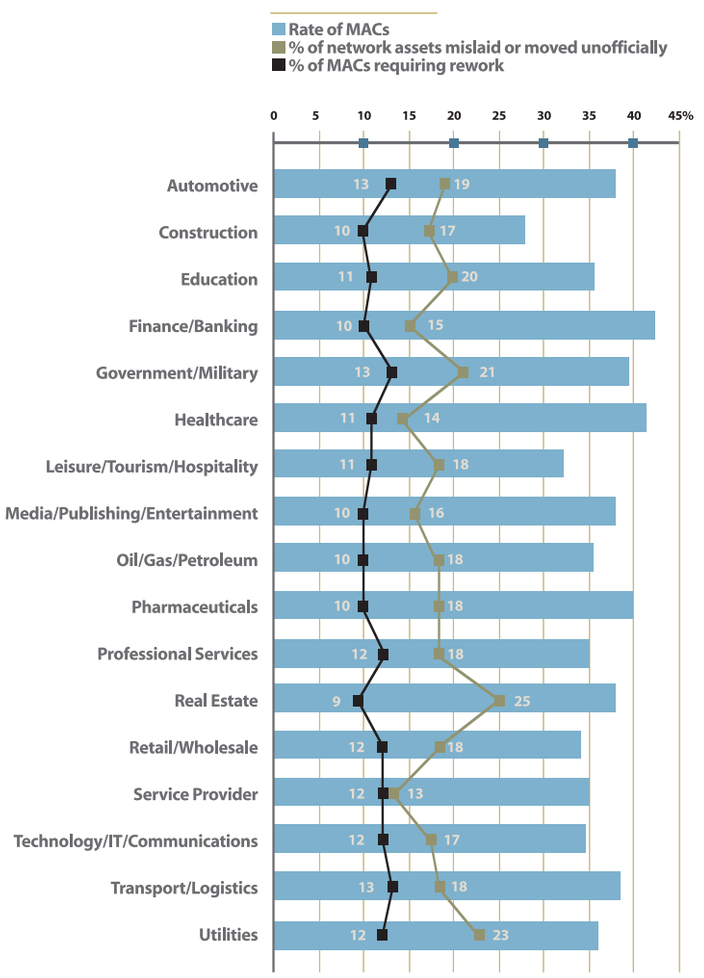


Globally, users reported an average MAC rate of 36% per year. EMEA had the highest MAC rate at 40% per year.

The rate of MACs has increased steadily since first reported in 1994. In 1994, the average rate of MACs ranged from 14% to 18%, depending on the industry. This rate increased to a global average of 23% in 2002 and 36% in 2006.

Overall, users reported that nearly 18% of network assets are mislaid or unofficially moved each year. APAC and CALA users had the highest percentages, 21% and 19%, respectively.

MAC RATES, BY INDUSTRY



Finance/Banking and Healthcare industries experience the highest MAC rates.

Real Estate and Utilities reported the highest percentage of network assets mislaid or unofficially moved.

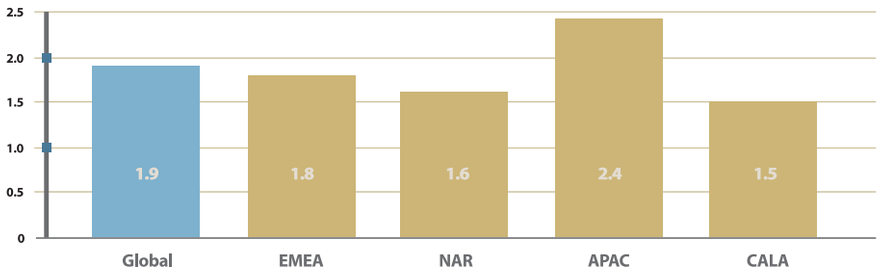
Overall, companies reported an average of 1.9 hours per MAC when a user changes location.

APAC users spend the longest time per MAC, with an average of 2.4 hours per MAC.

There has been no change in the average time per MAC from 2002 to 2006.

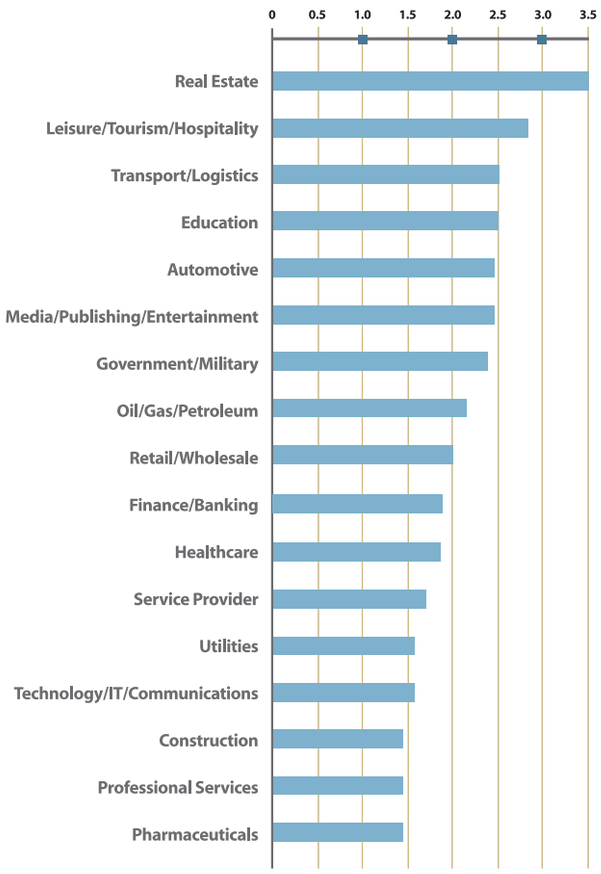
MOVES, ADDS AND CHANGES

AVERAGE HOURS PER MAC WHEN USER CHANGES LOCATION BY REGION



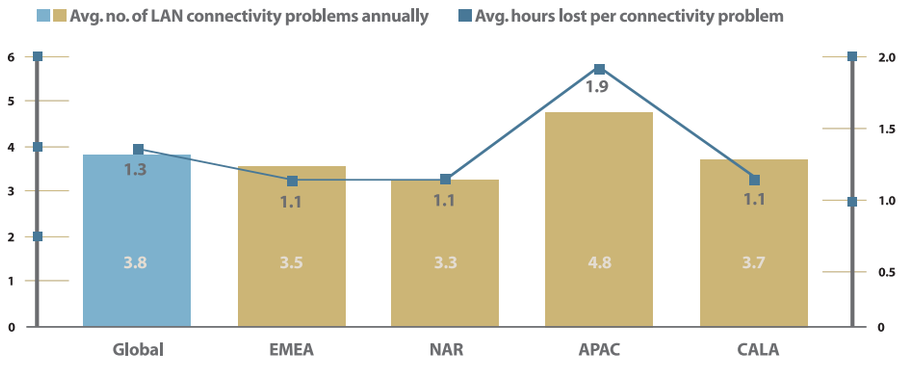
Real Estate companies reported the longest average time per MAC, 3.5 hours.

AVERAGE HOURS PER MAC WHEN USER CHANGES LOCATION BY INDUSTRY



IT MANAGEMENT AND MONITORING

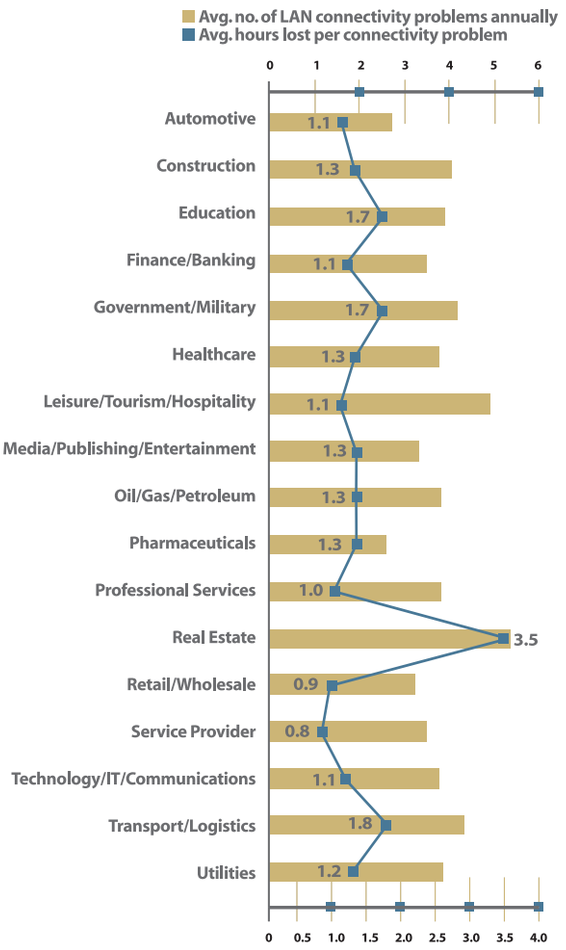
LAN CONNECTIVITY PROBLEMS, BY REGION



Globally, users reported 3.8 LAN connectivity problems annually, averaging 1.3 hours of time lost for each occurrence.

APAC users had the highest reported LAN connectivity issues at 4.8 problems annually, averaging 1.9 hours downtime per occurrence.

LAN CONNECTIVITY PROBLEMS, BY INDUSTRY



Real Estate companies reported the most LAN connectivity problems and the highest average time lost per connectivity problem. Real Estate participants also reported that initial cost was the primary decision driver for selecting cabling, highlighting the need to consider total cost of ownership, including ongoing costs such as downtime.

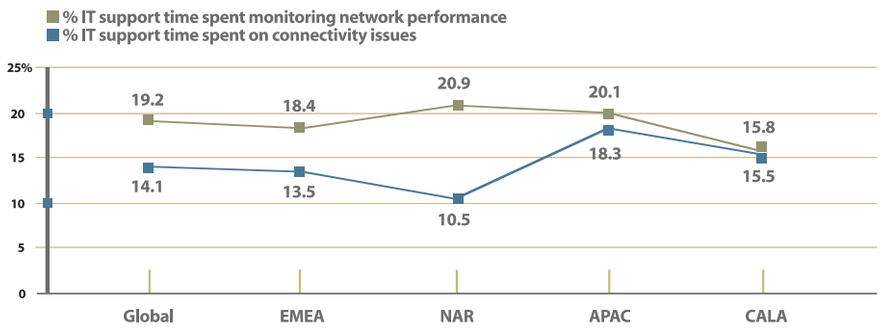
On average, companies globally spend 19% of IT support time monitoring network performance.

CALA users spend the least time, 16%.

APAC and CALA spend the most IT support time on connectivity issues, a function of the higher number of connectivity issues experienced by users in those regions.

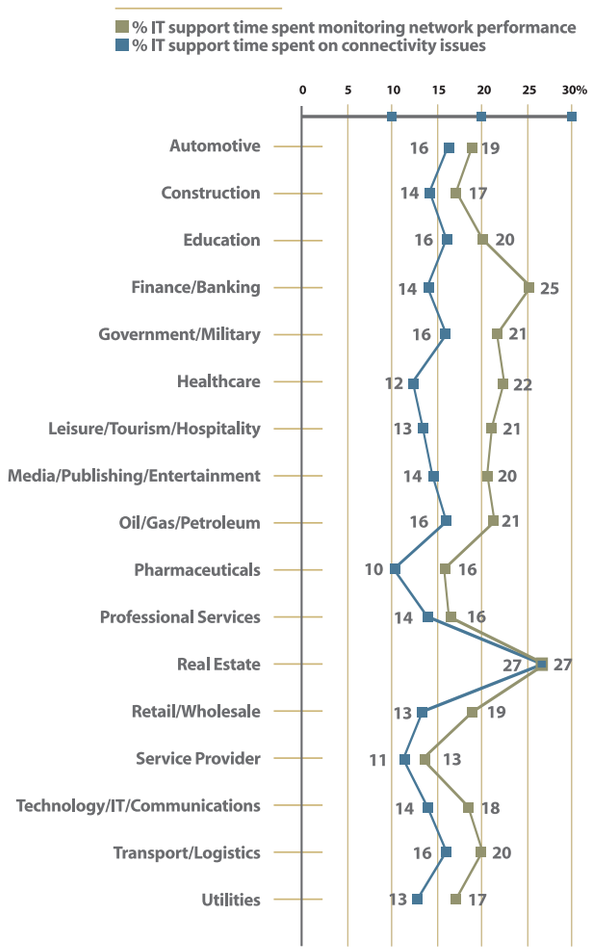
IT MANAGEMENT AND MONITORING

IT SUPPORT TIME, BY REGION



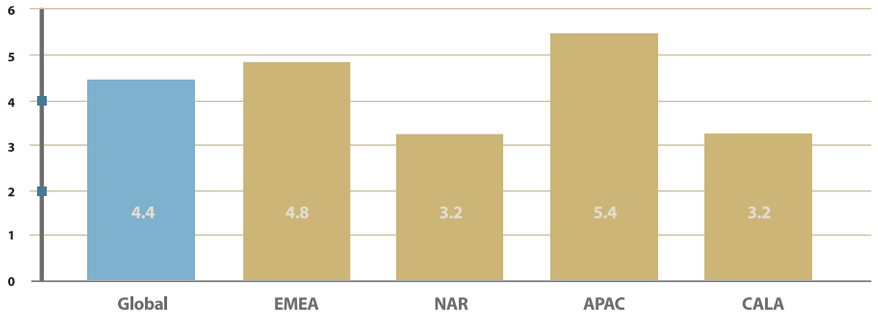
Real Estate companies reported the largest share of IT support time spent on connectivity issues.
Real Estate companies and Finance/Banking spend the most IT support time monitoring network performance.

IT SUPPORT TIME, BY INDUSTRY



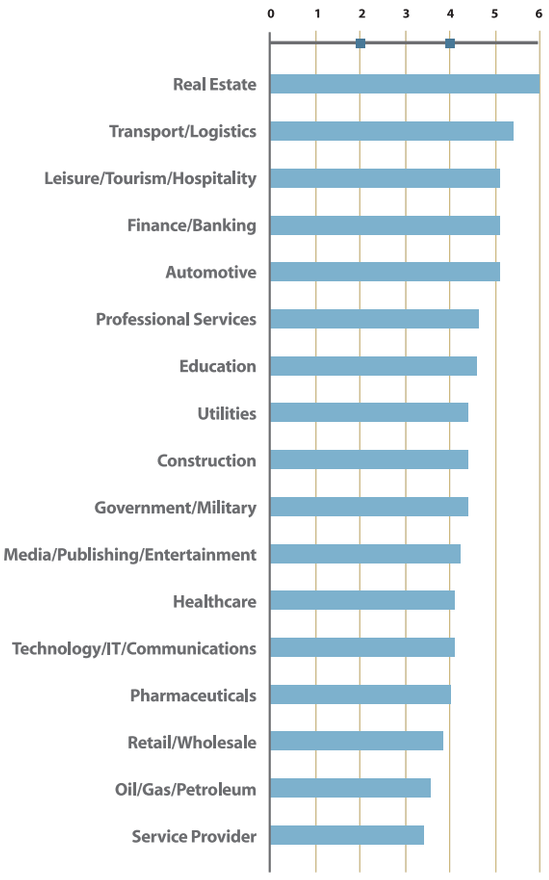
IT SERVICE PROVISIONING AND AUDITING

AVERAGE HOURS TO PREPARE/INSTIGATE IT SERVICE WORK ORDER BY REGION



The global average for preparing and instigating IT service work orders is 4.4 hours. APAC spends the longest time, averaging 5.4 hours.

AVERAGE HOURS TO PREPARE/INSTIGATE IT SERVICE WORK ORDER BY INDUSTRY

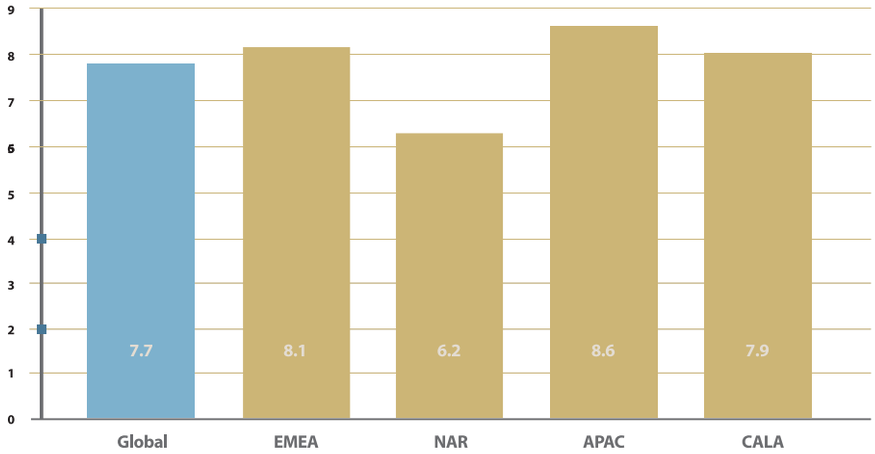


Real Estate reported the highest average time to prepare and instigate a work order for provision of an IT service for a user.

APAC companies reported an average of 8.5 hours/month spent auditing network assets. APAC had the highest percentage of assets mislaid or moved, which may drive the number of hours spent auditing network assets.

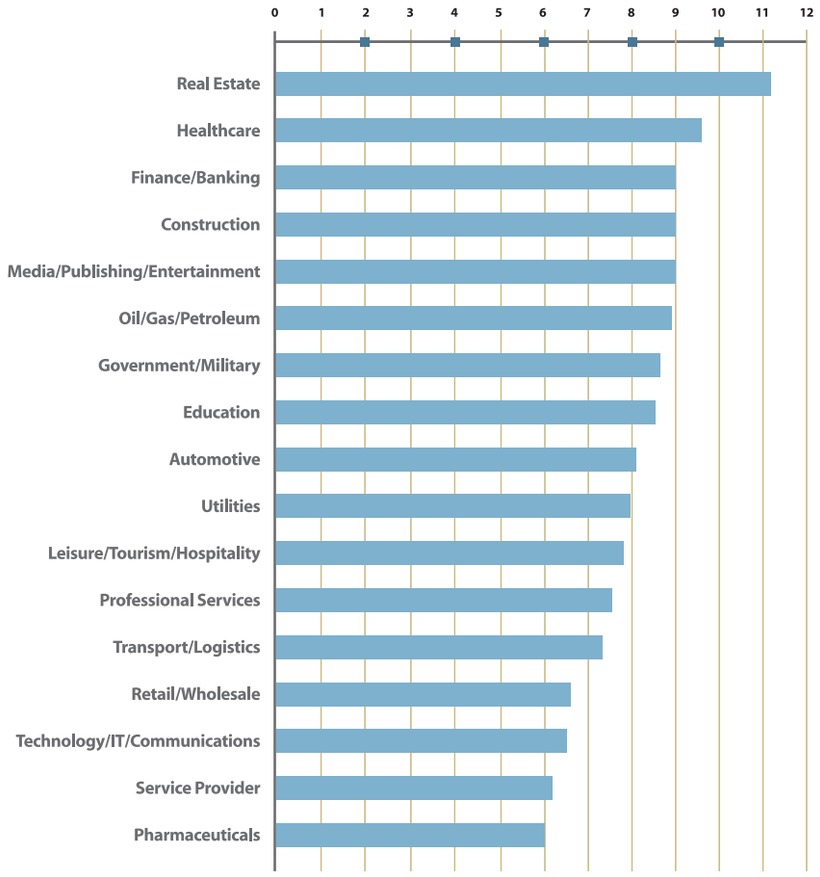
IT SERVICE PROVISIONING AND AUDITING

AVERAGE HOURS PER MONTH AUDITING NETWORK ASSETS BY REGION



Real Estate spends the most time auditing network assets.

AVERAGE HOURS PER MONTH AUDITING NETWORK ASSETS BY INDUSTRY



CONCLUSION

FROM A NETWORK INFRASTRUCTURE perspective, IT managers need to know as much about what a cabling solution will do for them as about what it does. And technology for technology's sake has taken a deserved back seat to using technology to enable business success.

IT managers must anticipate, meet and hopefully exceed business needs and objectives by:

- **Pleasing customers**—internal and external.
- **Increasing productivity** by helping people manage their time better and by shortening move, add, change (MAC) processes and/or response times.
- **Increasing revenues** by speeding response times and easily expanding to accommodate higher speed applications.
- **Cutting costs** for the creation and delivery of network services, the operation and maintenance of the infrastructure, and any potential expansion.
- **Solving unscheduled business issues** such as network downtime and human error.

The report shows that most IT managers suspect that downtime is an issue. They probably have a sinking feeling that money is draining from the company coffers every time a server crashes, an Ethernet switch flashes yellow and then goes dark, or a service provision to a key user takes a week to fulfill.

They are right. If the network is down, there is a real cost due to lost productivity for people on the network. By reducing downtime and therefore increasing uptime, substantial benefits can be realized from increases in employee productivity and subsequent revenue improvement.

SYSTIMAX® SOLUTIONS FOR INFRASTRUCTURE PERFORMANCE

The report details that desktop and backbone bandwidth continues to increase, driven by the requirements of business applications that continue to become more sophisticated.

Given this evolution, a well-engineered solution of switched 1 Gb/s Ethernet over high-performance UTP, such as the SYSTIMAX GigaSPEED® X10D Solution, to the desktop, and 10 Gb/s in the backbone over OM3 multimode fiber, such as the SYSTIMAX LazrSPEED® Solution, is becoming the common approach to network design today, while satisfying the general business LAN user community for the next few years.

The SYSTIMAX GigaSPEED X10D and LazrSPEED Solutions provide a complete end-to-end cabling solution. They form part of the integrated SYSTIMAX Structured Connectivity Solution, which also includes zero water peak singlemode fiber optic cabling—the TeraSPEED™ Solution. All are available now and designed to provide a smooth migration path to future technologies.

NETWORK INFRASTRUCTURE MANAGEMENT

But even the fastest network can still be difficult to manage, sapping valuable IT resources. To secure the information needed

HIGH PERFORMANCE CABLING INVESTMENT

The investment case for high performance cable relies on the assumption that there is a direct relationship between cabling performance and transmitted signal quality. This has been demonstrated by a series of published tests at SYSTIMAX Labs, as well as other industry laboratories. The SYSTIMAX Labs' experiments show how improved copper and fiber optic cabling performance can overcome impairments affecting network performance for high speed, bandwidth intensive applications. They clearly illustrate how cabling channels with superior performance can improve network performance and therefore decrease downtime.

to run the business, network connections in every part of the organization must be constantly monitored and managed. With the environment constantly changing, it can be an uphill struggle to stay on top of the demands.

The report shows that the challenge in most offices is handling MACs and dealing with network monitoring and auditing issues. Connectivity is a vital part of any facility, yet it can be the least effectively monitored and managed. As organizations demand increased speeds, 24x7 availability and reliability, and high levels of accuracy from their data infrastructure systems, this has to change.

SYSTIMAX SOLUTIONS™ FOR INFRASTRUCTURE MANAGEMENT

Real Time Infrastructure Management (RTIM) solutions, such as the SYSTIMAX iPatch® System, can cut network management costs, improve business productivity and help prevent financially damaging communications faults. The iPatch System offers IT managers complete control and management of their physical infrastructure connections, in real time, and is tailored to intelligently provide services, correct faults faster, improve security, and improve network management.

THE SURVEY SAMPLE

The 45 countries represented in this survey are as follows:

- Argentina
- Australia
- Austria
- Bahrain
- Bangladesh
- Barbados
- Belgium
- Brazil
- Canada
- China
- Denmark
- France
- Germany
- Hong Kong
- India
- Indonesia
- Ireland
- Italy
- Japan
- Kenya
- Korea
- Kuwait
- Malaysia
- Mexico
- Netherlands
- New Zealand
- Oman
- Pakistan
- Panama
- Philippines
- Qatar
- Russia
- Saudi Arabia
- Singapore
- South Africa
- Spain
- Switzerland
- Taiwan
- Thailand
- Turkey
- United Arab Emirates
- Ukraine
- United Kingdom
- United States
- Venezuela

GLOSSARY

10GBASE-T The IEEE standard for 10 Gigabit Ethernet over Twisted Pair Cabling. Ratified in June 2006, it includes cabling requirements for Alien Crosstalk and channel performance to 500 MHz.

APAC Asia Pacific and China

Backbone(s) The part of a premises distribution system that includes a main cable route and facilities for supporting the cable from the Equipment Room to the upper floors, or along the same floor to the wiring closets.

Bandwidth The range of frequencies that can be used for transmitting information on a channel. It indicates the transmission-carrying capacity of a channel. Thus, the larger the bandwidth, the greater the amount of information that can pass through the circuit. Measured in Hertz or bits per second or MHz.km (for fiber).

CALA Caribbean and Latin America

Campus A premises containing more than one building adjacent or near to one another.

Category 5e Enhanced Category 5 specifications for cable and connecting hardware products with transmission characteristics specified to 100 MHz, minimally compliant to support digital transmission of 1 Gb/s.

Category 6 Industry standard for cable and connecting hardware products with transmission characteristics specified to 250 MHz, designed for robust digital transmission support of 1 Gb/s.

Category 6A Identified as Augmented Category 6 or Class E_A, the specification currently in draft to become an industry standard for cable and connecting hardware products with transmission characteristics specified to 500 MHz and Alien Crosstalk requirements, designed to support digital transmission of 10 Gb/s over balanced pair UTP.

CRM Customer Relationship Management

EMEA Europe, Middle East and Africa

Ethernet A LAN originally developed by DEC, Xerox and Intel. It uses the CSMA/CD Protocol.

Horizontal Cable A cable connecting the floor distributor to the telecommunications outlet(s).

IEEE Institute of Electrical and Electronic Engineers in the USA. This organization is also involved in producing Local Area Network standards such as Ethernet.

Local Area Networks (LANs) A LAN allows users to share information and computer resources. Typically, a local area network is limited to a single building or campus.

MAC Moves, adds and changes

Multimode Fiber Optical fibers that have a large core and that permit multiple rays or modes to propagate through the core. Optical Multimode (OM) fiber types include OM1, OM2 and OM3. OM1 and OM2 generally refer to legacy multimode fibers with cores of 62.5 and 50 micron, respectively. OM3 refers to laser optimized multimode fiber with 50 micron core.

NAR North America Region

Singlemode Optical fiber with a small core diameter in which only a single mode of light is capable of propagation. 8.3 micron is the common standard core size.

Unshielded Twisted Pair Cable An electrically conducting cable comprising one or more pairs none of which are shielded.

Video Conferencing Real time communications via video between two or more users at separate locations.

SYSTIMAX®
SOLUTIONS

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