

White Paper: Media technology then and now

Media technology requires a creative, potential-oriented approach to technology. This makes the material extremely dynamic, development-intensive and versatile; advances in media technology are a sure indicator of where every life is taking place today.

For example, at school, there the blackboard was once wiped clean and the pointer waved. Then came the overhead projector. Today laser pointers, digital projectors and presentation software are the norm. Databases are replacing index cards, interactive whiteboards are replacing the blackboard. Learning content is streamed, lectures are transmitted via videoconferencing to foreign universities. Whole libraries have been digitized and networked globally. The educational possibilities of modern media technology are numerous and an indispensable part of our educational landscape. Even the justice system is now using the technical possibilities of the information age. Whereas experts and witnesses used to have to appear in person, statements can now be made via videoconferencing. Law enforcement agencies are part of an international network, police cars are equipped with digital cameras. In the political sphere, where one increasing one's popularity, reach and international networking are a must, one has always relied on the most modern technology: Decades ago radio and television broadcasts were the state of the art, but now there are high-definition videoconferencing systems, display-based voting systems and livestreams. National and regional assemblies, parliamentary group hubs and party headquarters around the world are generally equipped with state of the art communications systems. And unofficial bodies - such as the rapidly growing army of bloggers and the other media activists that have appeared in the past few years - have already discovered these technologies for themselves.

In the medical field, however, progress takes on a whole new meaning - it is literally a matter of life and death. Nowhere else is research so intensive, and nowhere else is it so dependent on modern technology; thus, the last decades have seen an explosion of groundbreaking developments. Although technical innovations such as endoscopy, sonography and tomography have permanently changed medical capabilities, media technology has also made a valuable contribution. Many medical procedures, equipment and expertise were previously fixed in one place and thus exclusively available only in particular locations or to particular teams. Now experts are consulted, results discussed and research findings shared using videoconferencing. Today's modern operating rooms are equipped with displays for showing the state of the various medical devices, for providing diagnostic and surgical support, as well as with video management systems. All operations are recorded for documentation, research and teaching purposes, or transmitted to other locations such as classrooms. Given the current status quo and the rapid pace of technological development, the vision of a "virtual" hospital seems within reach.

Directions, traffic signals, prohibitive signs and advertisements, on the underground, in airports, shops and public areas – we are all bombarded with a multitude of stimuli and information every day. No matter what the time or place, a variety of media are competing for our attention. This is nothing new - posters have been around since the Middle Ages, and our cities have resembled giant billboards ever since the latest developments in mass printing in the 19th century. While many traditional media are still used today, technical developments have long since entered a new dimension. Modern media technology is digital, dynamic and interactive. Today, displays with flexible content are used instead of rigid signs; they can be programmatically managed, updated and distributed by being linked to a content server. Visitors interacting directly with advanced welcome systems or direction displays using touch panels and pointers can be provided with individualized content. Where product ranges and individual products were once illustrated with posters, nowadays audiovisual projections and sound installations can provide information - even three-dimensional, holographic displays are possible.

Modern media technology is able to transform simple messages into impressive experiences. The showcase and driving force in media technology progress is obviously, the media industry. The changes that have taken place in these areas since the beginning of global networking are equally profound. The possibilities for gathering, processing and transmitting information are becoming more diverse; speed and availability are growing exponentially. Traditional channels such as print, radio or TV, now have powerful competition. Accordingly, the market and consumers have become much more demanding. To keep pace with this development, companies are using the latest communication technology.

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Editorial departments, for example, can be equipped with the latest unified communication, telephone and video-conferencingsystems at every office so as to be available and on-line at all times.

Stadiums and other large spaces for events provide a variety of technical media connection points for various types of signals. In-phase line array sound systems are installed so that the fifty thousandth visitor experiences the best possible, interference-free audio quality.

Museums offer their visitors their own smartphone apps for customizable tours and background information and they provide accessible information and guidance systems for those who are visually or aurally impaired. Nowadays a media infrastructure is well established and constantly available - the technology works reliably and discreetly in the background.

The defence establishment too has always been one of the mankind's most important technological development drivers - a variety of common everyday practices and technologies in chemistry, electronics, vehicle construction and many other areas have military origins. The same is true in the field of media and communication technology; the first video conference systems were originally communications channels for armed forces stationed across the globe - between themselves and with the home country, for both official and private purposes. Military security traditionally plays a leading role here as well. The highly demanding requirements for potentially vital data and information security mean that it is always necessary to be one step ahead of the current state of the art. For example, the telegraph brought speed benefits over messengers, and the radio overcame the risk of submarine cable failures - and ultimately the computer, which can encrypt and decode secret messages. The military was, and is, the driving force behind countless technical innovations - lucky for us, its greatest benefits are now available to civilian society as well.

In the hotel and catering industry satisfied customers are the Holy Grail. That was true a hundred years ago, and will still be true in a hundred years' time. But something has changed for today's hoteliers and restaurateurs; today's guests are more demanding than ever. Where once a simple meeting room equipped with a screen and an overhead projector was available for the business user, fully equipped conference rooms offering the latest generation equipment are becoming the standard for today - and are expected by the customer. Media components such as projectors, sound systems, videoconferencing technology, interpreting and voting systems and the like are standard equipment for competitive nationwide providers. Modern reception areas welcome their guests with ancillary displays featuring content that varies according to the occasion and that are controlled via a content management system. The media technology infrastructure is of the highest level. Today's guests expect something special. Bars and lounges cannot simply offer a fancy cocktail menu. In addition to individualized audio technology and optimized room acoustics, sophisticated lighting installations and even holographic 3D projections to create a setting and ambience that sets one apart from the competition are now being created. Whatever the guest wants - the possibilities are almost endless.

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Did you know?

In today's world videoconferencing systems are part of a sound business strategy; they cannot be ignored because they both reduce costs and create an environmentally favourable public image.

These cost savings and the reduction in the use of fossil fuel resources are considerable and an important factor in business planning for companies of all sizes. This leads to higher profitability and adds greater value for all stakeholders over the long term.

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