

World wide standards for desktop replacement technology

Canadian desktop replacement notebook giant Eurocom Corporation unveils responsible industry standards for hardware, marketing and sales

OTTAWA, ONTARIO - Desktop replacement technology leaders since 1989, Eurocom Corporation is releasing new standards for desktop replacement notebooks in an effort to educate the media, consumers and computer resellers about this newly recognized class of notebook computer.

These informal standards are intended as a guide for future development of desktop replacement technology market, and a resource for understanding the history, philosophy, application and marketing of desktop replacement technology.

History

Although the "desktop replacement notebook" class of computer may seem like a fairly new category to most people, it is actually over 9 years old and grew from humble roots. In 1989, Nepean, Ontario, Canada based Eurocom Corporation coined their very first notebook computer, the EUROCOM 2100 Super Notebook, as a "desktop replacement" notebook computer. The term "desktop replacement" described perfectly the function of the 386-based notebook, as it was equal in power and performance to the high-end desktop systems of the day. As early as 1989, Eurocom Corporation knew that businesses could effectively replace their existing desktop systems while adding a notebook of equal power to their computer arsenal.

Eurocom Corporation has since devoted virtually all their resources to desktop replacement technology development, marketing and education. Through sheer determination and foresight Eurocom has maintained a line of desktop replacement notebooks that has always been of equal or greater power and performance than the conventional desktop systems of the day.

Today, thanks solely to the efforts of Eurocom Corporation, the world is talking about desktop replacement technology and the implication it will have on future of computer development. Eurocom Corporation is

continuing to provide consumers with an "intelligent" alternative to the desktop system and believe they are closer than ever to the goal of the elimination of the desktop PC in favour of the desktop replacement notebook.

Philosophy

The philosophy behind desktop replacement technology is a simple one; the development of a portable (notebook) computer that is equal in power, function and features to the high-end desktop system of the day. The ultimate goal of desktop replacement technology is to completely standardize desktop and notebook technology resulting in the elimination of the need for desktop systems, or complete "desktop replacement".

Today's desktop replacement notebooks virtually eliminate the need for three computer systems, and effectively provides the consumer with a "total computer solution". The desktop replacement notebook replaces the desktop system in the office, the "lightweight" notebook on the road, and the desktop PC at home. The elimination of these three PCs dramatically reduces a consumer's overall computer operating costs.

Desktop replacement hardware standards

Life span

A desktop replacement notebook is designed to have a practical life span equal to that of a conventional desktop system. Because desktop system motherboards are flexible to upgrades, and industry standard desktop components (i.e. RAM, hard drives, and processors) are guaranteed to be available, a consumer can expect a greater life span from a desktop PC than from a conventional notebook computer.

However, a desktop replacement notebook is more similar to today's desktop systems as it has an equally flexible motherboard and also use industry standard components. This open-end hardware design ensures the consumer a portable computer that can be easily upgraded to current technology for years to come.

This example is illustrated in the figures released in PC Magazine (UK), August 1997. The figures show that a Toshiba notebook, classed as a "lightweight" notebook, had a practical life span of only 1.8 years. According to figures released by Eurocom Corporation, a desktop replacement notebook has over twice the practical life span, reaching in many cases 5 years. A conventional desktop system sold today will

have a practical life span of approximately 5 years.

Flexibility

The addition of support for new technology is a primary benefit of desktop replacement technology. Desktop replacement technology anticipates, adapts and conforms to changes in computer industry technology. In most cases, desktop replacement notebooks are designed to support and incorporate technology that is only in the development stage. The result is a notebook that can support a feature or component that has yet to be manufactured.

By charting the course of computer development, desktop replacement manufacturers can anticipate what features need to be incorporated into the design of a notebook in order to ensure that when the new technology is released, a totally new notebook will not have to be created.

New industry standard technology is mainly developed to be incorporated into desktop systems first and not generally directed towards conventional notebook design. However, because desktop replacement notebooks have such a flexible design, these new technologies can usually be incorporated into the desktop replacement notebook immediately. Conventional notebook technology will usually have development wait for a manufacturer to develop a "notebook specific" form of the technology. This delays the process considerably for the consumer, and usually results in having to purchase a new notebook with a proprietary version of the new technology. Desktop replacement notebooks however, allow consumers to have the newest technology features immediately, and as the industry standard features are generally designed for desktop systems, at a much lower cost than "notebook specific" components.

For example, a desktop replacement notebook is designed to support DVD-ROM through a removable CD-ROM bay. Thanks to the flexible design of desktop replacement technology, support for DVD-ROM technology was developed long before DVD-ROM was commercially available. The same example can be used for features like processor upgrades, MMX technology, displays, PC card technology, hard drive technology, and RAM upgrades.

Another important feature that highlights the flexibility of desktop replacement technology is interface function. Incorporating as many interface options as a conventional desktop system is a prime key to what makes a desktop replacement notebook. Consumers must be able to use virtually any peripheral accessory as easily as they could with a

desktop, without the need to buy an expensive docking station, or in many cases, a new notebook.

A desktop replacement notebook functions more like a desktop system than a conventional notebook system. Upgradeable CPUs are socket or slot based like conventional PCs. A desktop replacement notebook carries no RAM on the Motherboard, allowing for easy RAM upgrades, like a conventional desktop system. As well, Hard drives are industry standard and removable, which allow for the maximum storage options.

However, the most important feature of desktop replacement technology is concurrent operation of all drives built into the notebook. For a notebook to be a desktop replacement notebook it must function as a desktop does. This means access to the floppy drive, hard drive and CD-ROM concurrently. A desktop replacement notebook user does not have to compromise access to any drive in order to operate the computer. According to desktop replacement technology design principles policy, "A desktop replacement notebook will follow the guidelines of the conventional desktop system in technical design, operation and function." This means a desktop replacement notebook operates primarily as a desktop system in terms of basic computer function and applications.

Desktop replacement notebooks follow the design of desktops in regards to having "flexible design" for extras like additional PC cards or internal slots for MPEG, network or modem. As well, desktop replacement designers are continually charting accessory technology development to ensure a notebook will always provide support for future applications and technologies. Port replicators are a unique and valuable addition to a desktop replacement notebook as it allows for easy docking and removal, illustrating the "desktop replacement" concept.

A desktop replacement notebook will always be consistent in providing consumers with the latest technology first, upgradable industry standard components and support for all current and future interface functions.

Affordability and availability of technology

Desktop replacement technology is in fact the most advanced and affordable technology on the computer market. Desktop replacement technology adapts to the current "industry standard" technology in order to provide consumers a practical and affordable means of consolidating all of their computing needs in one package.

Desktop replacement technology is designed from the consumer's point

of view. The direct benefit of this technology to the consumer is a marked saving of money due to the dramatic decrease of computer operating costs. When taken into account, the desktop replacement notebook will effectively replace two desktop systems and a lightweight notebook for the average computer professional. Overall computer operating costs are immediately reduced due to the elimination of one or more desktop systems in either the office, home or both. Operating costs are based on yearly expenses resulting from hardware, upgrades, accessories, software and other incidentals. The average operating cost per computer, per year, for business is estimated at over \$20,000.

The major factor keeping desktop replacement technology affordable is through the use of industry standard components and accessories. Desktop replacement technology will support as many industry standard components as possible in an effort to provide consumers with the most flexible design. Industry standard components also ensure an affordable supply of main components in the future for repairs, upgrades or modifications. This also greatly expands the practical life span of the computer. "Lightweight" notebooks have mainly "proprietary" components which may either be unavailable or very expensive in the future. As well, these proprietary components are rarely upgradable.

By using industry standard components and achieving the most advanced yet flexible design of any personal computer, the desktop replacement notebook benefits the computer user in a number of "intelligent" ways. By reducing overall operating costs desktop replacement technology saves consumers considerable money. By having a long practical life span those operating cost savings will stretch at least five years. And by incorporating industry standard components whenever possible, consumers are at ease concerning any upgrade or service issues, as they are guaranteed an affordable supply of components for the future.

Marketing desktop replacement technology

Responsible marketing

Marketing and advertising a new "concept" product is a tricky thing. In order to generate sales effectively, companies who market new or innovative products must educate their market as to the applications and benefits, while balancing their responsibility to the general public by not misleading the uninformed.

Conventional notebook technology, if not properly represented, can be easily passed off as desktop replacement technology through advertising that suggests one can simply replace a desktop system with

a notebook computer. However, only a desktop replacement notebook is specifically designed to function as a desktop system and consumers who purchase anything other than a desktop replacement notebook to replace their desktop system will invariably be disappointed in the results. It is the responsibility of the computer industry in general, including the media and computer resellers, not to mislead the consumer in any way concerning any form of computer technology.

To the average consumer, purchasing computer hardware can be a very difficult and intimidating task. Average consumers are dependant on the information provided by the major computer manufacturers and the media when attempting to make an intelligent purchasing decision. To date, the marketing strategies of a percentage of the major notebook manufacturers have been to purposely mislead the public into believing certain notebooks have special qualities, capabilities and applications. This misrepresentation eventually leads to consumer disappointment and damages the credibility of the notebook industry.

Any computer manufacturer who produces a line of notebook computers in conjunction with a line of desktop computers could not possibly produce "desktop replacement" technology, nor subscribe to the desktop replacement philosophy. There would be a fundamental conflict of interest resulting from the production of one line of product designed to eliminate the need for another line of product, marketed by the same manufacturer. Major computer manufacturers who market desktop and notebook systems concurrently aim to sell consumers multiple systems, including a desktop system at the office, a desktop system at home and a notebook computer in between. Providing true desktop function in a notebook would eventually eliminate the need for desktop systems altogether, therefor resulting in product genocide.

However, when these manufacturers list "desktop replacement" as a benefit of their product, they do so solely to capitalize on the marketing an public relations of the few companies manufacturing and marketing true desktop replacement technology.

Media Relations

In an ever changing and often confusing industry, computer manufacturers have more power to influence the media than in any other field. With new products and developments being released every day, computer reporters and editors have a huge task trying to sort out what is relevant and newsworthy. Computer manufacturers realize there is an overload of information being sent to the media and can capitalize on this by distorting information and having the media report it as the

"truth".

While it is the media's responsibility to provide the most accurate and impartial information to their readers, it is also the responsibility of the manufacturer to be a reliable source for the media. The two parties must work hand in hand to educate the public concerning new and complex issues in the computer industry.

When new technologies are introduced, manufacturers solicit the media to explain to the public the benefits and applications of these new products. Often times the information provided to the media is meant solely to benefit the product's marketing position, and not designed to truly "educate" the media concerning the uses and benefits of the product for the consumer.

As a new "concept" in today's computer industry, virtually any notebook computer manufacturer can misrepresent desktop replacement technology to the media. The media must be aware of which companies are producing "true" desktop replacement technology, and which companies are capitalizing on a "buzz" word.

Conversely, manufacturers who market a notebook computer that is clearly not a desktop replacement notebook must be responsible to the consumer by not misrepresenting the philosophy, technology and application of their product when explaining the benefits of their product to the media and public.

It is important to remember that the ultimate goal of desktop replacement technology is the complete elimination of the need for conventional desktop PC systems. Any company that manufactures a line of desktop PCs, and concurrently markets, in whole or in part, a line of desktop replacement notebooks, or claims "desktop replacement" as a benefit of their product, is ultimately misleading the consumer.

Advertising standards

Regardless of the type of computer product or service a company markets, paid advertising to the public reflects on the entire industry.

Because the general public at large has a limited knowledge of computer products, manufacturers may be tempted to misrepresent the capabilities, benefits and applications of their product. In the notebook computer industry alone, there are many examples of manufacturers misrepresenting the capabilities of their notebook computers in paid advertising. Some ads are so blatantly misleading that the message is insulting to anyone who is active in the industry. Manufacturers realize,

however, that for every one person offended by their message, there are ten people who believe it as "truth".

The industry concern is that as consumer education levels rise, the credibility of the industry will plummet. Today, it may be argued that computer ads have virtually no educational value and serve only to prompt sales through entertainment and suggestion. In an industry as complex as any on earth, a computer manufacturer has a responsibility to educate the consumer, to a degree, through the millions of dollars spent on advertising per year.

As a new computing concept, such mainstream advertising is undermining desktop replacement technology. Over the past 9 years, companies who manufacture desktop replacement technology have put more advertising resources into educating the public to the benefits of desktop replacement, than in production values. The result is an increased level of confidence shown by both computer resellers and the public toward information associated with desktop replacement technology. As well, this "responsible" advertising approach has led the media to regard information associated with "desktop replacement technology" as a reliable and safe topic of discussion.

Reseller channels

As for any product sold through reseller channels, dealers who resell computer technology are of absolute importance to the manufacturer. Computer resellers have the ultimate decision as to which technology they will recommend to the consumer, and will base their recommendations on various factors.

A major factor in the growth of the desktop replacement notebook market has been a result of the commitment of certain computer resellers to represent computer technology to the public in a fair manner. These responsible dealers will solicit information from the consumer and help determine what their technical needs are. As well, these resellers take the time to fully explain desktop replacement technology in addition to the more conventional computer options, then allow the consumer to choose the technology that best suits their needs.

Computer manufacturers often have incentive programs to direct resellers towards representing their product to the consumer. However, it takes more than monetary incentives from computer manufacturers to keep a computer dealership running. Customer satisfaction and personal service are the most important factors in long-term success of any business.

Desktop replacement notebook manufacturers realize that the investment to educate computer resellers in desktop replacement technology is invaluable to all concerned. With an educational training program, computer resellers can effectively offer their clients an "intelligent" option to current mainstream technology, consumers will receive a product that meets their needs, and the manufacturer will succeed in educating the consumer in an alternative fashion.

In order for a manufacturer to effectively educate a computer reseller, a large commitment is needed from both parties. The manufacturer must have an effective means of communicating with the reseller, and the computer reseller must be receptive to the information and schedule time to learn it. As well, the computer reseller must be committed to the philosophy of desktop replacement technology. As many computer resellers either produce or represent desktop systems, they must agree with the philosophy that the industry is going towards desktop replacement. To be an effective representative of desktop replacement philosophy, the computer reseller must be committed to determining the needs of the client and providing the right product for their needs.

It has been established that computer resellers who represent desktop replacement technology are more interested in advancing technology and customer service than gross sales. Although sales are important, these resellers have looked to the future and committed to becoming experts in an emerging technology. The future growth of this technology will continue to depend heavily on the commitment of the independent computer reseller to the philosophy of "desktop replacement".