by our staff

MAGIC MIRRORS FOR LIFTS AND LUXURY CABINS

GATEWAY TECHNOLOGY - THE IOT MIRROR FOR LIFT CARS, DEVELOPED BY TGD - THERMO GLASS DOOR (PART OF THE LU-VE GROUP) - WAS INITIALLY DESIGNED FOR THE HOTEL SECTOR BUT IS ALSO PERFECTLY ADAPTABLE TO YACHTS AND SUPERYACHTS.

The "magic mirror" was created for hotel and luxury applications but could also become strategic in the yacht and superyacht sector, in lifts and luxury cabins. Gateway is among the most innovative solutions from the LU-VE Group. The company, based in Uboldo (Varese), is an Italian multinational (quoted on the Milan stock exchange) specialising in refrigeration and air conditioning that decided to exploit the technologies developed in the refrigerated counter door sector alongside the potential of the Internet of things to transform mirrors in lift cars and other structures into "multimedia windows" connected to the Internet for displaying various kinds of content: from safety and commercial information to photos, videos, advertising and digital signage, through to instructions for lift maintenance technicians. Gateway - The IoT Mirror for Lift Cars is the name of the technology, patented in Italy and with a European patent applied for. The solution was designed and developed by TGD - Thermo Glass Door, the company of Travacò Siccomario in the province of Pavia, owned by the LU-VE Group and specialising in the design and production of doors and glass closing systems for all sectors of the refrigeration market. The first "magic mirrors" have already been sold to Wittur, an Italo-German group making lift components, which is promoting them in Italy. The first Gateway was delivered in Italy in 2018 to a prestige hotel in Montecatini, Tuscany.

Broader communication

Traditional lifts generally have a button to press to control what the lift is doing and handle emergencies. But the communication they offer between the user and the operational centre is very limited. Thanks to Gateway communication is not limited to audio signals but also includes video and Internet connection to improve com-

The magic mirrors from TGD, initially designed for the hotel sector, can also become strategic in the yacht and superyacht sector, in lifts and luxury cabins.

The magic mirror can be positioned in spaces where people meet up, such as hotels, pubs, fitness centres, ship saloons and anywhere it is necessary to attract the attention of people.

munication between the user and the outside world. Animated video messages to transmit advertising, information for the user and entertainment can be handled by a single communication system.

In the case of yachts and superyachts the system can also be used to trace passengers on the basis of age group, embarkation requirements and other characteristics.

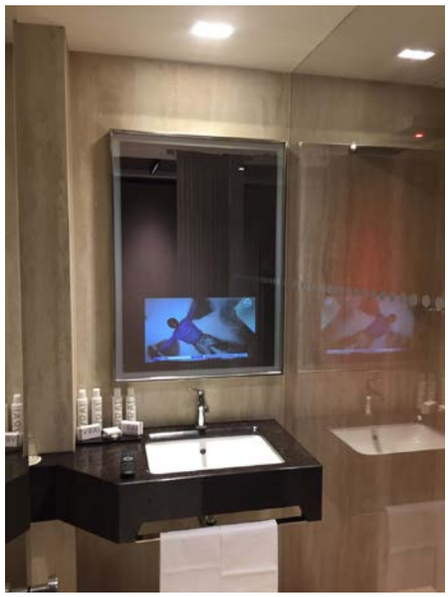
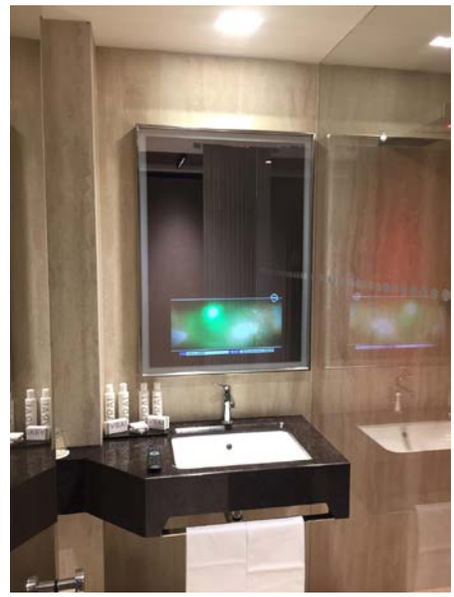
"Technologies developed in the refrigerated counter door sector alongside the potential of the Internet of things transform mirrors in lift cars and other structures into "multimedia windows"

It is also possible to offer customised information or other services based on user needs. For example, the touchscreen could be set to display information in larger than usual format to meet the needs of people with impaired vision. The Internet of Things (IoT), which allows objects to intercommunicate and to access information gathered by other objects and which, according to experts, will involve 30 billion objects worldwide by 2020, has been considerably exploited in Gateway technology, which transforms an ordinary mirror into a fully multimedia tool connected to the Internet.

Innovative luxury systems

Traditional systems, with auxiliary means of communication inserted, often have poor quality in terms of design, video dimensions and brightness. Moreover, TV screens or touchpads can easily be subjected to vandalism and theft. Gateway hides the entire hardware setup behind the mirror, avoiding many risks. Architects and designers can exploit the opportunities offered by Gateway to create elegant and luxurious innovative systems using new communications systems and digital signage. Gateway permits multiple communication in real-time in a single system, from a single point. A touchscreen offers interaction between the user and the external virtual world via the Web. All of this facilitates the job of the maintenance operator. It is possible to read information on various parameters on site, making available operations and services that require interaction between the system and the user. The integrated professional screen is designed to operate 24/7 with efficiency and considerable brightness, while touchscreen mode can be activated both remotely and locally depending on requirements. Full HD (1920 x 1080 resolution), connectivity (both online and offline) via Lan, Wi-Fi, HDMI, DVI-D, OPS, USB, SD CARD, IR, Audio, RJ45 are among the features of the display, the size of which can vary (42", 49", 55" with other options available), and orientation can be either horizontal or vertical. However, the "magic mirror" can be made-to-measure and adapted both to new lifts and lifts being modernised. The entire structure is lightweight, slim and elegant. The glass of the mirror is strong and reliable. Since it is based on the technology used in refrigerator cabinet doors, it is suitable for intensive use, resists impact and is reliable over time. The tempered glass, in accordance with EN 12 150 regulations, has a ductile strength of150N/mm², about five times that of normal glass. If it

TGD installed in bathrooms in a hotel.


Animated video messages to transmit advertising, information for the user and entertainment can be handled by a single communication system.

breaks, this kind of glass shatters into small fragments with rounded edges that do not cause harmful wounds. The design is adaptable both for the mirror and the finish. Elegance and adaptability are a very important aspect of the design of the structure. It is possible to customise both the mirror and the finish, according to customer request.

Different levels

The Gateway offers several possibilities of connection with the digital world. Once it is connected to the power supply with a simple PC cable, it can be connected to a local network (LAN o Wi-Fi) and then give access to the Internet. Once connected, the system becomes an interface that displays an infinite variety of content that can be managed on three different levels (entry level, pro level and advanced level). Entry level uses basic software and a certain number of templates that can be customised by a remote PC connected to the same network. Customisation has to start from the existing templates. The second level, Pro level, has the same characteristics as Entry-level but a larger number of templates. It permits the creation of new content and the connection to RSS Feed to update the user. It is designed to use in a local network, but can manage a group of displays registered on the same network. The user can manage the distribution of content from a single PC for all the devices connected on the same network, with different planning and format for each individual device. The most advanced level makes it possible to manage a network of devices connected to different local networks and physically far apart (as in the case of an international hotel chain). With dedicated hardware and software, it connects all the devices via Internet and makes it possible to create, classify and distribute content from a central office. This level is indispensable when the system integrates a video camera or other interface system controlled from a remote location.

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Best service and safety

Safety is managed with a micro web cam, which enables audio visual connection between the assistance and safety service for the lift passenger. The system can detect health emergences or other problems in the presence of children. For the passenger, being able to see a human face instead of just interacting through an audio conversation in an emergency can help reduce panic and understanding of the communications from the assistance and safety service. The device has the potential to offer considerable support to programmed and predictive maintenance services, displaying useful information and tools for on-site maintenance personnel. Audio video communications, together with touchscreen technology, allow maintenance staff to connect to service centres and access files containing manuals, instructions, documents and technical navigation information for fast and easy access to information on the lift system. Tests carried out on Gateway, says Fabio Liberali, a board member of LU-VE and codesigner of the "magic mirror" together with Alessandro Cremaschi, new business development head of TGD, had very positive results. "The prospects are interesting, both economically, since our investment was very small and the margins are potentially high, and because the technology could have other applications, for example in face recognition, generating personal information on the basis of individual characteristics." he aim of the company is to make available to its partners and customers new opportunities to increase the value of their products and services wherever they operate. Among the first "magic mirrors" made available by TGD is the digital iHotel mirror, designed for spaces where people meet up, such as hotels, pubs, fitness centres, ship saloons and anywhere it is necessary to attract the attention of people.