

## CIZGI TECHNOLOGY: TAKING ON THE WORLD'S LARGEST AIRPORT

Çizgi Teknoloji Elektronik Tasarım ve Üretim A. Ş, or Çizgi Technology Electronic Design and Production Co. was founded in 1994 in İstanbul, Marmara, Turkey with the desire to bring cutting edge technology to their clients. They have three principal areas of business. The first, Digital Signage and Kiosks, includes information screens, video walls, totems, way-finders, self-service kiosks, queuing kiosks, point of sale kiosks, and informational kiosks. The second, Medical PC Solutions, Operating Room Integration Solution with Medical Video Management and Real Time Video Broadcast and Conferencing, Console Type Medical Computers for Operating Rooms, Operating Room Control Panels, and Bedside and Intensive Care Computers. And the third area, Industrial PC Solutions, consists of Industrial Panel Computers, Industrial Monitors, Industrial Kiosks, and Marine Monitors.

Their focus on digital enhancements for unique working environments has helped them to become a leader in this area throughout Turkey and in Europe. Çizgi takes pride in providing the right solution to benefit a client's immediate and long-term needs with the best technology available.

### CHALLENGES

Çizgi Teknoloji specializes in meeting unique requests from their clients. Recently, a very important client requested a large and intensive project from Çizgi's team. Representatives of the new Istanbul Airport, the world's largest airport terminal, approached Çizgi about providing kiosks that could scan passenger ticket information and direct the passengers to the proper gate. Considering the size of this new aviation locale, it was no small task for Çizgi to undertake. This architectural marvel covers 76 million square meters (more than 818 million square feet or 18,780 acres) and will handle 90 million passengers a year in phase one of its operation. When the entire airport is completed in 2025, it will be able to handle 200 million passengers a year. That will make it the world's largest airport and busiest for passenger traffic, almost doubling the current leader, Hartsfield-Jackson International Airport in Atlanta, Georgia, USA.

A passenger trying to navigate this enormous facility could easily get turned around or become lost. The manpower required to staff information desks for the purpose of providing directions would be costly and inefficient on such an enormous scale, not to mention the need to provide interpreters for the myriad languages spoken in this international hub. In order to

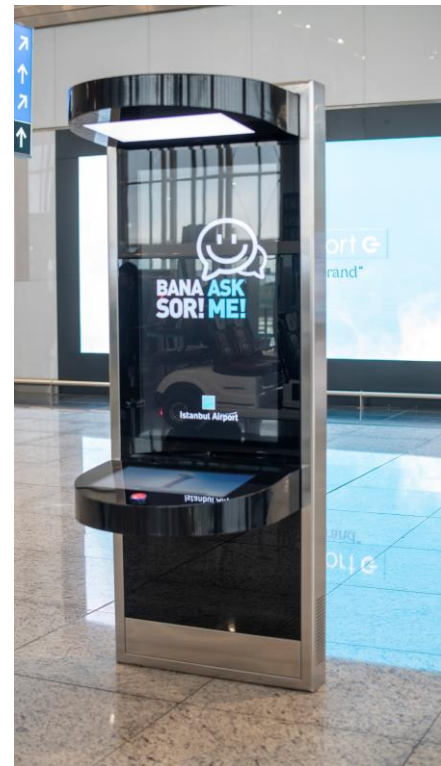


accommodate the needs of this disparate group of travelers, the airport turned to Çizgi Teknoloji to create options that would allow passengers to have access to directions and information for navigating the massive location using only their boarding pass. This would eliminate the overwhelming logistical hassle and cost of staffing human interpreters throughout the facility.

Çizgi has been designing and producing innovative technology products using industrial automation and IT since their founding in 1994. With experience in creating industrial PC, medical technology solutions, kiosks, and digital signage with the goal of staying on the cutting edge of technology and providing optimum solutions for their clients, they were up to the challenge presented by the Istanbul airport. For Çizgi, it represented an opportunity to demonstrate their outstanding abilities for a global audience by providing a durable, unique solution.

Çizgi developed a concept for a kiosk that could scan a barcode from a passenger's boarding pass or an e-ticket from their cell phone, search the data base of arriving and departing flights, and locate the gate number for the passenger's flight. When the gate has been determined, the kiosk provides a map to direct passengers from the kiosk to the correct gate. Known as the Next Gen Ask Me interactive kiosk, it required not only the ability to scan but offered a push button for live video chat as well.

This particular project had a number of challenges associated with it. Obviously, the sheer size of the facility presented obstacles to the Çizgi team, but some of the larger complications came with the more practical issues. For example, to be successful in providing directions to travelers, the scanner was required to read barcodes that were wrinkled or faintly printed, read barcodes from the shiny or glossy display of a phone or table, and also be able to read barcodes from a distance. The software had to be powerful, fast, and accurate to achieve each of these objectives.



The Çizgi testing team looked at different barcode scanning software development kits (SDKs) from four different companies. The primary objective was to find a solution that could read barcodes error free from a distance on repeated attempts with 100 percent accuracy regardless of the condition of the paper or phone display. Each of the four solutions was challenged to scan from a distance of 150 cm, try after try, under a variety of circumstances. The most accurate software would be presented to the R&D department for use in the airport kiosks.

## **SOLUTION**

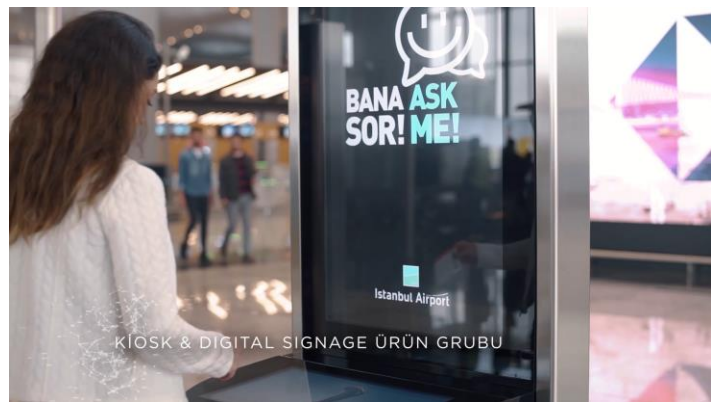
Code's CortexDecoder SDK for Windows was the ultimate winner from the software SDKs tested by Çizgi. The software was able to accurately read the barcodes presented from a distance of 150cm, which equals 59 inches or just under 5 feet, regardless of the condition of the paper or the digital screen. This impressive feat gave Çizgi the confidence to proceed with the enormous project using only the CortexDecoder SDK as their kiosk scanning software.

CortexDecoder was installed into the Istanbul Passenger Information Kiosks in order to scan the paper or digital boarding pass photos of passengers looking for gate information. The data read from the boarding pass is used to direct the passenger to the correct gate for their flight. These kiosks are placed in high traffic areas so they are easy to find and easy to use for passengers in a hurry to catch their flights.

According to Çizgi, the software integrated easily into their systems and they have not encountered any difficulties with it since launching. Additionally, they haven't needed any further engineering or programming to meet their assigned tasks. The kiosks operate successfully without costly maintenance. Only minimal servicing and upkeep have been necessary to continue successful operation of the scanners.

## RESULTS

In its first three months of operation, from April to July 2019, the new Istanbul airport served almost 16 million passengers, 100,000 flights, and was awarded the "Airport of the Year" by the International Airport Review for 2019 in the Reader's Choice category. While the award is certainly based on a variety of factors, one of them would have to be the convenience offered by the Next Gen Ask Me kiosks designed by Çizgi and featuring Code's CortexDecoder scanning software.



For passengers, this means no more standing in crowds, staring at ever-changing reader boards filled with data for an overwhelming number of flights while searching for the correct one. The most current information is uploaded to the kiosks so that it is available on demand for passengers in a hurry to find the correct gate. With more than 17,000 people a day making their way through the airport with their paper or digital boarding passes, tens of thousands of successful scans are being completed to help them find their way. The kiosks save time, stress, confusion, and crowds at the world's largest airport, and that is no small achievement.

The success of this massive undertaking has put the proverbial feather in this technology company's cap, and Code was honored to be a part of this impressive project. If you have a project that you think we can help with, give us a call: 801-495-2200, or visit our website to see more information. [www.codecorp.com](http://www.codecorp.com). Let us show you how we can exceed your expectation.