INNOVATIONS AND BASIC DIRECTIONS OF AUTOMATION DEVELOPMENT AT AIRPORTS

Al-Muqri Saif Ali Mohammed Salem[1], Matveeva Valeria Pavlovna[2]
Samara University, Samara city

Annotation: A method and system for airport or other building security where passengers or persons entering a building approach a check-in point or check-in counter and must undergo a positive identification (ID) by fingerprint scan, retinal scan, or an other means of positive identification. A digital photograph can then be taken of the person. The person is given an electronic smartcard that has wireless capability. The person carries the smartcard while in the airport or building. The system is notified when the person enters a secure gate area, boards or leaves an aircraft, etc. In addition, the system can determine if a person is carrying more than one smartcard or if a card has been abandoned. The system detects and tracks any undesirable person in the airport or building an provides a means for apprehending the person by security or law enforcement personnel. In addition, immigration or customs can be notified about any undesirable person arriving in an airport. The system allows airline personnel and security personnel to know when an unexpected or unwanted event or person is in the system.

Keywords*: Airports, passengers, smart airport, technology, security, Modern systems.

Airport security is a huge challenge with billions of passengers and baggage traversing through hundreds of airports and thousands of flights on a daily basis. According to the 2019 World Airport Traffic Report by ACI (Airport Council International), worldwide airport passenger numbers increased by 5.3% in 2019 to 5.44 billion and global passenger traffic is expected to top 12 billion by 2031. The booming air travel industry and stringent regulatory requirements necessitates regular overhauls of airport runways and other infrastructure to keep up with current and future demand. Moreover, the continuously growing sophistication of threats are forcing airport to become highly vigilant and are dictating the need for smarter security solutions. These factors are driving investments to the tune of billions of dollars towards the development of identification and screening technologies such as radio frequency identification (RFID) technology, biometrics and prototype screening devices among others.

The present invention is a method and system for airport or building security where a passenger or other person presents him/herself at the check-in counter in the normal way. After the ID process, the passenger can be checked into the flight in the

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normal way and then given a smartcard wireless device (which will be called a PASS smartcard) which serves as a boarding pass and airport tracking device. The pass smartcard is a small, flat, card like a credit card that can contain electronics and wireless communication capabilities. Since the location of this smartcard wireless device can be tracked in the airport by normal wireless antenna location means, by GPS, or by direction fixing between multiple antennas, or any other tracking means, the approximate location of the person is known at all times while in any area of the airport or building. In the case of a positive ID of a dangerous or wanted individual, law enforcement officials can apprehend the person anywhere in the airport or building that allows a safe and non-disruptive apprehension.

The system also reports when the person has passed through carry-on security (normal X-ray, etc.), or any other security check point, when the person is in the departure gate area, and when the person has boarded an aircraft. At boarding, a second security check can be made with a second fingerprint or retinal scan or any other positive identification means to verify that the person who checked in originally is the one boarding the flight. The system can positively make sure the person boards a certain aircraft and stays on since egress could be controlled by having to present the PASS smartcard to exit. In the rare case of someone having to legitimately leave an aircraft after boarding, airline personnel would be immediately notified by the smartcard at egress to ascertain why the exit is being made and being able to assist the person (who might have gotten on the wrong plane, might be sick, etc.). An illegal or unexpected egress would be immediately noted by airport security personnel. It is also possible to continue to communicate with the PASS smartcard inside the aircraft if the craft is also equipped with a wireless system. In addition, satellite communication can be carried on with the aircraft and smartcards inside the aircraft while it is in flight or parked at a gate. Upon arrival at a final or intermediate airport, a normal egress from the aircraft would be noted by the system in the new airport. The passenger's location could be tracked by the system to baggage pickup and airport exit, or until re-boarding a subsequent flight. When the passenger finally exited the final airport, the smartcard could be collected and recycled for reuse, and the system would note that the person had left the system.

The key to the present invention, and the major improvement over prior art, is the totally and positive identification of the person, a possible security check on every individual in an airport or any other secure building against law enforcement or imigration/customs information, positive tracking at all times as to the location or the person in the world air transportation system consisting of all participating airports, and a final determination that an individual has arrived at a final destination and departed the system. The present invention could be optionally applied to all people in airports or any other building including visitors by also requiring them to register on entry, at least by fingerprint scan, and also carry a pass smartcard while in the airport or building. This system would not be an unacceptable burden on privacy considering it would be totally unintrusive except for the required positive ID and the requirement to carry the smartcard while in the airport. Anyone who tried to leave an airport without a smartcard could be stopped and re-identified (sometimes people might lose the

smartcard). A lost pass smartcard could be located through wireless communication with it. In this optional scenario, probably only a fingerprint check would be made at the entry with a very simple, visitor's PASS smartcard being given to the person. In the case of a passenger; a more sophisticated PASS smartcard could be exchang.

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INVESTING IN TECHNOLOGY AND MARKETING STRATEGIES FOR RESTAURANTS TO IMPROVE THE EXPERIENCE OF HOTEL GUESTS

Ali Hassan Takla[1], Matveeva Valeria Pavlovna[2]
Samara University, Samara city

Annotation: The article is dedicated to studying the role of modern technology in improving the experience of hotel guests and increasing customer satisfaction. A number of modern and modern tools are proposed to help increase hotel profits and productivity, taking into account hotel classification and analysis of results before and after the use of these methods. An analysis of tourism activity and the impact of

[1]2nd year master student at the faculity of Economics and Management, Samara University. Scientific adviser: Y.V.Matveeva, Doctor of Economics, Associate Professor, Professor, Department of Economics , Samara University.
[2]4th year student at Samara University, Institute of Engines and Power Plants, Department of Automatic Systems of Power Plants.