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Outstanding scientist of the year 2006: Rogel Patawaran, BS.

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Source

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Abstract

Rogel Patawaran is cofounder of iQSecure Solutions, Inc., a secure web mail company, which began in 2002 and is currently based in Santa Monica, California. Its unique service enables hospitals, clinics, and doctors' offices the opportunity to have secure web-based video and telephone conferencing by simply switching online services offered by this innovative company. In addition, he is cofounder of AuthoTecq, based in Long Beach, California, and inventor of the AuthoTecq system in 1999. The AuthoTecq system is an online credit card processing company. Rogel Patawaran sought to remedy one of the problems facing users of internet transactions. Because internet merchants act as their own gateway for financial transactions, they have been storing credit card numbers in their own databases, thereby failing to address the necessary security provisions involved in the storage of such sensitive information. AuthoTecq removes this responsibility from the merchant by processing financial transactions on behalf of the merchants. Its system dramatically reduces credit card theft, and thereby decreases the amount of credit card fraud. In his landmark book *Saving Lives & Saving Money*, Newt Gingrich, former Speaker of House of Representatives, describes a new approach to the challenge of creating a better system of personal health and health care for the 21st century, a system that saves lives and saves money. He indicates that you could be visiting a clinic with electronic medical records, electronic laboratory reports, and electronic drug prescriptions. This entirely electronic clinic saves money and lives because it is far more accurate than a paper system. Such clinics exist at the Kaiser Permanente Hospitals, the Mayo Clinic in Jacksonville, Florida, the Cleveland Clinic, many Harvard hospitals, and all Veteran Administration hospitals in the US. He indicates that healthcare is the only industry in America that can give you a disease and then charge you to cure it. He further reports that out of 100 hospital patients, five or six will be the victim of a preventable error. He states that medication errors alone kill 7000 people each year, adding \$2 billion to the overall cost of healthcare. He stresses that these 7000 needless deaths are not only unacceptable but un-American as well. During the 1990s, the pharmaceutical industry sought help from the Food and Drug Administration (FDA) to develop a standard by which a paperless system could be adopted for healthcare. In March of 1997, the FDA issued its final ruling, which established the criteria for which the FDA will recognize the transmission of authenticity within

electronic data as well as establishing standards of authenticity for electronic data equivalent to the validity of signatures on paper documents and records. The FDA also recognizes the growth that can be experienced by converting healthcare technology to a paperless system, such as the expediting of patient files in a more organized manner, increasing the speed of file transfer of such documents, reducing prescription errors, enabling computer-generated data analysis and statistics, and reducing storage space. Rogel Patawaran and his colleagues also realized that electronic healthcare technology using the highest standard of data encryption to transfer data could also dramatically improve the safety of patients in our nation and the world. To answer the needs within healthcare technology, Rogel Patawaran created a system for healthcare providers using the most superior encryption methods, and in the process creating iQ Solutions, Inc. Its web mail system uses the Public Key Infrastructure (PKI) format, which is the strongest known encryption format. PKI is used in combination with the Advance Encryption Standard (AES) digital encryption algorithm, which is the current algorithm used by banks and government agencies, thereby protecting the privacy and accuracy of the information. Rogel Patawaran's remarkable contributions to the encryption process will aid in the number of lives saved as well as helping to avoid medical malpractice by ensuring the accuracy of medical records, as well as reducing the number of medication errors or inappropriate prescriptions being filled. These remarkable accomplishments in patient safety are accomplished at a rapid speed that ensures that data-sensitive patient files can be securely transmitted between and within hospitals. Finally, with the growing need for an electronic system within the medical field, doctors will be able to securely access all such data from anywhere and at any time, thus reducing the age-old problem of time constraints that a paper system presented doctors and hospitals alike. In recognition of Rogel Patawaran's contributions to the medical field through the use of encryption teamed with the transferring of sensitive data such as hospital records, Rogel Patawaran has been selected as the Outstanding Scientist of 2006.

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