# Building a Generic Architecture for Medical Information Exchange among Healthcare Providers

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## Abstract

Due to the inability to exchange clinical information among hospitals, continuity of care cannot be maintained and a tremendous amount of medical resource has been wasted. This paper describes an architecture that would facilitate exchange of clinical information among heterogeneous hospital information systems. It is dubbed 'Medical Information Exchange Center' or MIEC as part of a six-year Health Information Network Project hosted by the Department of Health. MIEC was designed so that it is innovative yet technically feasible today. It is convenient for authorized users yet secure enough so people can trust and has minimal impact to participated hospitals. Authorized users will be able to access information through two web-based interfaces directed to physician and non-physician users respectively. Hospitals are connected through a virtual private network to exchange patient information and users need to obtain a private key from the certificate authority in order to securely connect to MIEC. A pilot project was conducted to demonstrate the feasibility of this architecture and the problems encountered were discussed.