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KEY WORD: WEB SERVICES DATA GRID USING HL7 STANDARD

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AND DATA GRID. THESIS ADVISOR: ASST. PROF. PANJAI TANTATSANAWONG, Ph.D.
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The independent study proposed to use DataGrid method in order to share the patient data. In this study, the process was presented by testing the exchange patient data in different operating systems; Windows and Linux, different database systems; MySQL and PostgreSQL, different hospitals software; HosXP and HospitalOS and different data format. The DataGrid was created via the principle of Web Service that the hospital used the modified standard format of HL7, which is the worldwide standard, for giving service in receiving and sending data between hospitals to share data together that was the principle of DataGrid. The study was developed into four service models. First was the GetPatientBloodgrpToHL7 that was used to search the name of patient who has wanted blood group. Second was the GetPatientByCIDToHL7 that was used to search the name and address of patient from ID code. Third was the GetPatientVisitByCIDToHL7 that was used to search the symptom of patient from ID code. Finally, the GetPatientXrayFilmByCIDToHL7 was the service for search the patient's X-ray film from ID code. All of services were modified the data format in the standard of HL7 version 3.0 in the form of XML file. The DataGrid system had high security by receiving certificate from data agent, who acts as a certificate authority (CA), only to use in the security system of patient data and this certificate can promote security in sharing information between hospitals. From this principle, they can help to exchange patient data and need not to know where is the data come from and what is the data format. These can help doctor to know the detail of the patient data such as record diseases and treatment results so as to diagnose and cure the patients, who need to admit in other hospitals, rapidly and efficiently.

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