

MedLAB1(ML1); a Software Defined Health Informatics Messaging Protocol for Medical Laboratory Technology

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Abstract

Electronic Hospital Records (EHR) are usually designed so that records from different vendors can exchange all data according to public standards. Health Level 7(HL7) for instance, is a voluntary consensus standard for electronic data exchange in health care environments. It defines standard message formats for sending or receiving data on patient admissions, registration, discharge or transfer, queries, orders, results, clinical observations and billing.

However, in this work, we designed and implemented a proprietary messaging protocol suite for medical laboratory tests called MedLAB1 (ML1). ML1 is implemented in software

and it contains medical laboratory records acquisition, retrieval and communication protocols which can interoperate seamlessly with HL7. Various medical laboratory tests that could be handled by ML1 are; chemistry test, culture diagnosis, heamatology, hormonal assay, urine analysis, urine microscopy diagnosis, acid fast bacilli, widal analysis and stool analysis.

Keywords:

EHR, HL7, ML1, Health informatics, Diagnosis, Messaging protocols.