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Enhancing QoS protection in MPLS networks

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MPLS recovery mechanisms are increasing in popularity because they can guarantee fast restoration and high QoS assurance. In fact, QoS is important for interactive voice and video application and for specific clients. However, link failure always incurs delay and packet losses of the traffic passing through the failed link. Therefore, network has to restore the traffic by switching the affected traffic to alternative path. In this paper, QoS objectives are concerned in this study to redirect the protected traffic with acceptable levels of quality before failure take place. The proposed scheme setup more than one alternative path in advance in order to introduce fast rerouting and the selecting criteria is based on the required bandwidth and end-to-end delay. In this work, we proposed the traffic splitter to split the protected traffic after failure, in case the available bandwidth in the alternative path is not enough to deliver the traffic. Finally, alternative path selection is updated based on current network resource availability. To verify the efficiency of the proposed algorithm, the MPLS network simulator MNS-2 has been used as the test platform.

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A Novel Integrated Web-Based Medical and Emergency Model

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The current situation of medical, healthcare and emergency related system in Malaysia shows that it is mostly separated and not fully computerized. The fully computerizing and combining of medical healthcare and emergency systems will lead to produce a Novel Integrated Medical and Emergency system. This integrated system is being divided into three main parts which is the web based medical and emergency system, intelligent agent, and mobility. The system contains a database that will communicate and cooperated with intelligent agent and mobility. The main drawbacks for the current medical, healthcare, and emergency systems in Malaysia include: Difficulty in searching and reviewing up to date records for patient, doctor, hospital, drug, etc since many of such records are still kept in filing cabinet. The current electronic medical record EMR are not used in all medical centers, stand alone, and not standardized which leads to difficult communicate, harder to manage and exchange the patient data between various medical units. This research project focus mainly on developing an interactive web based Database to serve this integrated model. The main objectives are: To build interactive distributed information system on medical and emergency where all hospitals, health care and emergency centers can view the patient record simultaneously, exchanging, managing and collaborate on sharing resources between medical units. To eliminate the monotonous and time consuming task of filling out numerous medical forms while visiting new physician or new hospital. A prototype for this work is build and sample of the results are shown in this poster.