



Published Researches الأبحاث المنشورة



Title عنوان البحث	Quality Evaluation of IP Multimedia subsystem تقييم جودة نظام الاتصالات الفرعي ذو الوسائط المتعددة
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Abstract خلاصة	<ul style="list-style-type: none">• The difference in dealing with the mechanism of the traditional communication services has led to the importance to develop communication subsystems that linking the different systems together in terms of services and enabling the Audio-Video call services through the fourth-generation networks, depending on the Internet protocol and not just switching circuits.• This research represents a reference and experimental study based on software and hardware simulations of a proposed IP Multimedia Subsystem that uses a single-board computer in its architecture (Raspberry Pi) which allows for an experimental numerical evaluation of sound quality from the point of view of jitter, time delay and packet loss factor.• In addition, it takes into consideration the simplified electronic model (Simplified E- Model) algorithm to transfer the numerical values to the equivalent of the Mean Opinion Score value.• This research also concentrates on evaluating the quality of voice calls in IP Multimedia Subsystem system based on an experimental study Through group of real tests to determine the effect of using different codecs on voice calls within the proposed system according to the Estimation Victor adopted in the research, such as: "jitter, time delay, packet loss, used codec".• As a result, by comparing the values of "Mean Opinion Score" parameter within the proposed system with the values recommended from the International Telecommunication Union, we have found that the proposed system provided a sound quality close to the recommended one when using some types of audio coding and values lower than when using audio codecs with a high Bandwidth.