MMSPix - A Multimedia Messaging Service (MMS) Medical Images Weblog

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Abstract

Smartphones with cameras have added a new dimension to augmenting medical image collections for education and teleconsultation. It allows healthcare personnel to instantly capture and send images through the multimedia messaging service (MMS) protocol. We developed a searchable archive, a mobile images Weblog of camera phone images for medical education. Registered users can view and comment on uploaded images. The archive is compartmentalized to allow sharing images with all viewers and by clinical specialty groups.

Background

Mobile phones have transformed society irreversibly. Smartphones with cameras has already made an impact in social interaction. For the mobile clinician or researcher, the camera phone is the ideal communications device -- a versatile, portable version of a camera-equipped, Internet-linked desktop computer that works even in remote areas of the world. Its computing and communication capability is continuously expanding. The camera phone's wireless capability allows the capture of clinical images not possible before. We created MMSPix, a mobile images weblog (imblog) archive of camera phone images for medical education [1].

Methods

The MMSPix architecture is shown in Figure 1. Images may come from clinical sources, ultrasound or X-ray prints, computer monitor images or outside scenes. A camera phone image may be sent directly by email either from the mobile phone or after downloading to a computer. The server automatically checks incoming email every five minutes. We are currently developing the capability to send pictures directly from the camera phone to our GSM modem. The server will accept only specific image types attached to email. Users are encouraged to include a non-identifiable clinical history or image description to improve the pictures' teaching value. Email confirmation is sent to the contributor. Moderators review the images before other users can view them. Only registered users can view and comment on the images after login. Images are compartmentalized in three groups: 1. Commons - images that contributors may consider of general interest and viewable by all; 2. Group – for special interest groups, such as clinical specialty groups like dermatology, public health, etc.; and 3. Carrel – a temporary folder for user images. The archive is searchable by image name. Brief user comments on diagnosis or clinical teaching can be added. Some MeSH terms in image titles or comments may be linked to MEDLINE/PubMed.

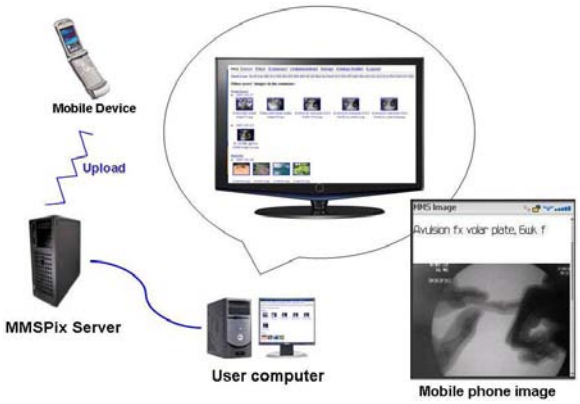

Fig 1. The MMSPix architecture

Discussion

MMSPix provides a platform for clinicians and researchers interested in medical education and telemedicine to share their teaching images and to exchange opinions. Only registered users can add their comments. News and updates may be sent to registered users as warranted. Its value will be dependent on user contributions.

Conclusion

We have developed a mobile image Weblog (imblog) for sharing medical and health education images for teaching and telemedicine. It is publicly available to registered users.

References

[1] http://mms.nlm.nih.gov