

APPULSE

C/C++ PRACTICE

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SOFTWARE SERVICES OFFSHORING FOR SMALL AND MIDSIZE BUSINESSES

CONTENTS

C/C++ PRACTICE

CASE STUDY – VIDEO LIVE STREAMING

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- Working in C/C++ since Company's Inception and gained in-depth exposure to MFC.
- Some of the work done by us includes
 - Building of C/C++ application and tools on multiple platforms
 - Porting of C/C++ applications to all UNIX flavors and 64-bit environments
 - Developing large scale systems and multi-threaded applications.
 - Building device drivers and printer drivers
 - Multimedia application based on Microsoft's DirectShow framework
 - Point of sale solutions

EXPERTISE AREAS

- C/C++, VC++
- x264, libmpeg, faad, libmad and ogg-vorbis
- SOAP, Web Services
- Directshow, gstreamer
- High Volume Databases
- Network Programming (TCP, UDP)



Government of India

Case Study - ImageStreamMedical Inc

BUSINESS SCOPE

- Provide an innovative and productivity enhancing integrated control solution for operating rooms (OR) and EndoVascular suites
- Key requirements for this project included a competency in video and image management,
- Ability to provide real-time visualization of the OR from remote locations.
- In each OR, staff will have complete touch panel control over video, lighting, audio, XM radio and hands free telephony.
- Video Conferencing for helping surgeons demonstrate live surgical procedures to students.
- Interface and control a variety of hardware include streamers, decoders and PZT cameras.

APPULSE SOLUTION

- Appulse proposed a .NET Framework based architecture to control how the video was routed, user access control and provided hooks for video streaming across the Hospital LAN.
- XML based API such that multiple types of clients can interface with the system (web browser, thick clients, mobile devices)
- Highly Fault-tolerant system so that if one module crashes, the overall application is not affected. Crash Recovery in case of software failure.
- Developed a custom protocol to synchronize data transfers for smooth playback.
- Cache Management to reduce network traffic and improve response.
- An easy to use video editor was developed for doctors to create and edit videos for educational demonstrations.

Platforms and Databases: Windows Vista, 2003, Macintosh, Windows CE / Mobile, Embedded Windows XP, All Browsers, Connectivity: IrDA, USB, Bluetooth, Serial, SQL Server, RAID Storage

Technologies: C/ C++, C#, .NET, Agile Processes, WPF/XAML, WCF, MFC, IDL, XML, XSL, Windows Services, Sockets, Multithreading, Drivers, HIPPA, HL7, Object Oriented Design

Case Study - ImageStream Medical Inc

MainStream OR provides a two way communication route between ORs and other locations on the hospital's network. Each OR and procedure room, as well as any properly configured PC on the hospital's network has a direct connection to a VaultStream server, which acts as a central repository for all video and images produced during the procedure. With the addition of LiveStream to a network server, properly configured PCs can view any video source in the OR.

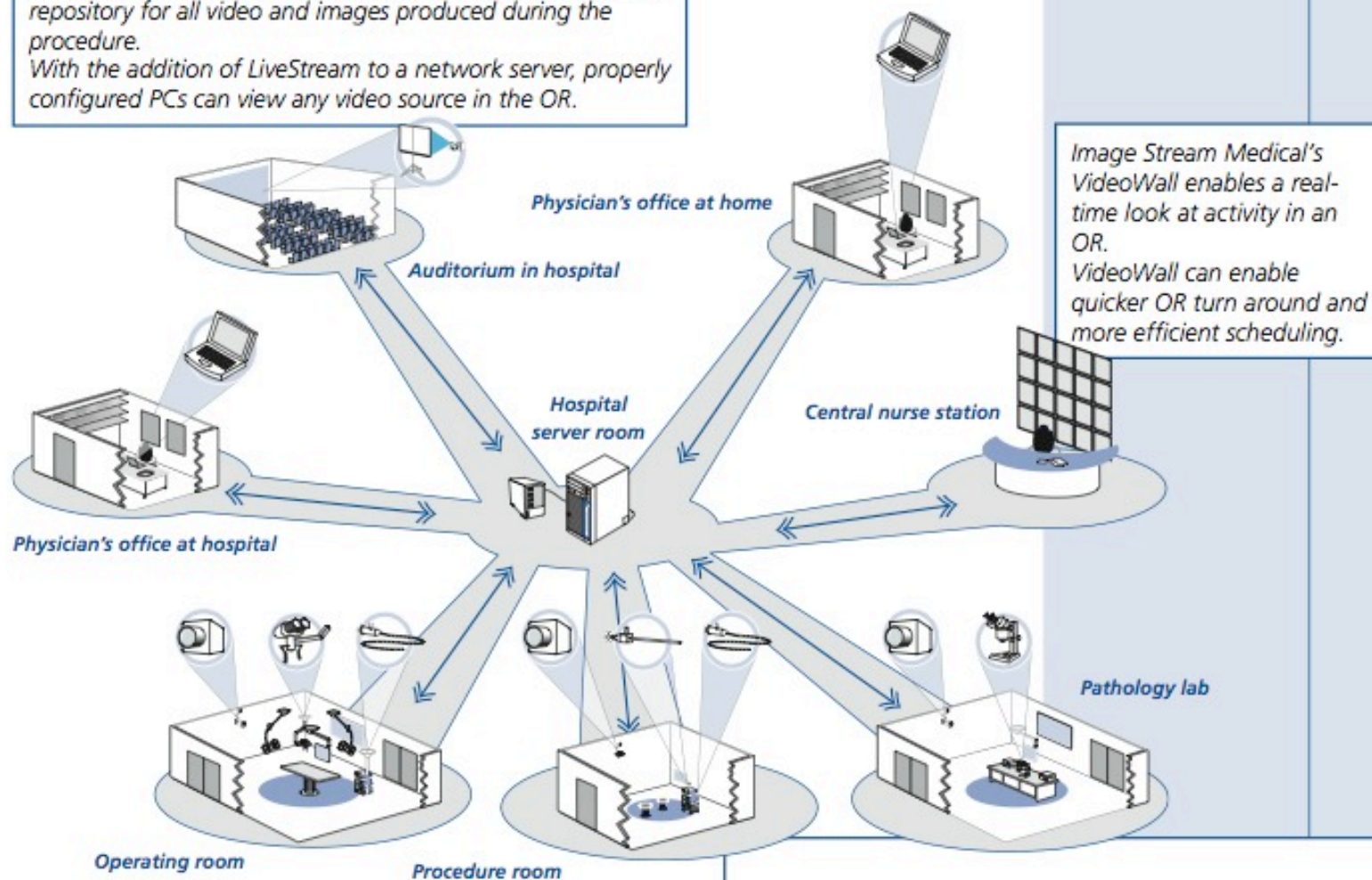


Image Stream Medical's VideoWall enables a real-time look at activity in an OR. VideoWall can enable quicker OR turn around and more efficient scheduling.