

Clinical Skills Testbed Event: Stanford OR – Sydney - March 30/31st, 2006

Interactive Teaching Session - Laparoscopic Surgery

Purpose: This event is a pilot for using broadband Internet to present surgical case studies live from the Operating Room to a remote teaching location.

Descriptor	Decision
Host Location	Ambulatory Surgery Center, Stanford Hospital
Additional Locations	CSIRO Marsfield office in Sydney
Technology	<ul style="list-style-type: none"> • DVTS Codec modified by Chris Gunn & team (?) (CSIRO) • Viking Systems Endoscope-Endosite 3Di Digital Vision System
Network Infrastructure	Internet2, AARNet, & CENTIE (see Figure 1)
Network Requirements	2 30 Mbps full duplex streams (unidirectional) 1 30 Mbps full duplex stream (bidirectional)
Stereo Video (OR)	DVTS Codec – Linux version <ul style="list-style-type: none"> • Viking camera with S video splitter, computer running Linux with Canopus capture cards • Viking headmounted display for surgeons
Videoconferencing (OR)	DVTS Codec – Windows XP version <ul style="list-style-type: none"> • 2 wireless microphones • flat panel monitor • Sony VX2100 DV camera with Beachtek Audio adapter (for dual audio input)
Stereo Video (Sydney)	DVTS Codec – Linux version Stereo projector & screen Passive stereo glasses Recording hardware (one stream only)
Videoconferencing (Sydney)	DVTS Codec Linux version AccuMic II Plasma TV – approx. 40” Recording hardware
Set-Up & Testing	<ul style="list-style-type: none"> • at least 5 tests between CSIRO & SUMMIT Collab Room (network & scenario) • 7 tests between CSIRO (Canberra & Marsfield) & OR • dress rehearsal with LeRoy & Linda Lewis + technical • final testing between OR & Marsfield
Pre-instruction Training	<ul style="list-style-type: none"> • 1/2 hour with Dr. Nezhat, Linda Lewis & Pat Cregan (LeRoy) • 3 videoconference calls
Content	Laparoscopic procedure - endometriosis
Teaching Methodology	Observation of surgery with Q&A
Resource Materials	<ul style="list-style-type: none"> • Handout on Viking System • Handout on anatomy • Consent form
Instructors	Camran Nezhat, Linda Lewis, LeRoy Heinrichs, Pat Cregan
Participants	5 Surgeon or Surgeon Residents
Event Staffing Requirements (SUMMIT)	<ul style="list-style-type: none"> • Pat: designed evaluation in coordination with Duncan; analyzed questionnaire data • Robert: set-up, testing, network & Clinical engineering coordination • Jason Meador: set-up and network testing • Margaret: logistics: scheduling, coordination with CSIRO