University of Puerto Rico
Medical Sciences Campus

Use of DVTS for Live Transmission of Medical Endoscopic Procedures

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JOHNS HOPKINS
MEDICINE
CONTINUING MEDICAL EDUCATION

DIVISION OF GASTROENTEROLOGY
presents
Eighth Annual

Gastroenterology and Hepatology
Viva la Vida

March 10 - 15, 2008
Intercontinental San Juan Hotel
San Juan, Puerto Rico

PRE-CONFERENCE SYMPOSIUM:
Endoscopic Imaging and Therapies
for Gastrointestinal Neoplasia:
Today and Tomorrow

March 10 and 11

CONFERENCE
March 12 - 15

NURSING WORKSHOP
March 12

KLINIKUM
der Johannes Gutenberg-Universität Mainz

CENTRO COMPRENSIVO DE CÁNCER
universidad de puerto rico

ASGE
AMERICAN SOCIETY FOR GASTROINTESTINAL ENDOSCOPY

Jointly presented by The University of Mainz, Germany and The University of Puerto Rico Cancer Center
Endoscopic Nursing Workshop jointly provided by The Institute for Johns Hopkins Nursing
This course meets the guidelines as established in the "Framework for Post-Residency Surgical Education and Training" and is endorsed by
the Society of American Gastrointestinal Endoscopic Surgeons (SAGES).

Speakers

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Acknowledgment

Applications for commercial support from health care related industries are pending. A complete list of contributors will be provided in the syllabus.

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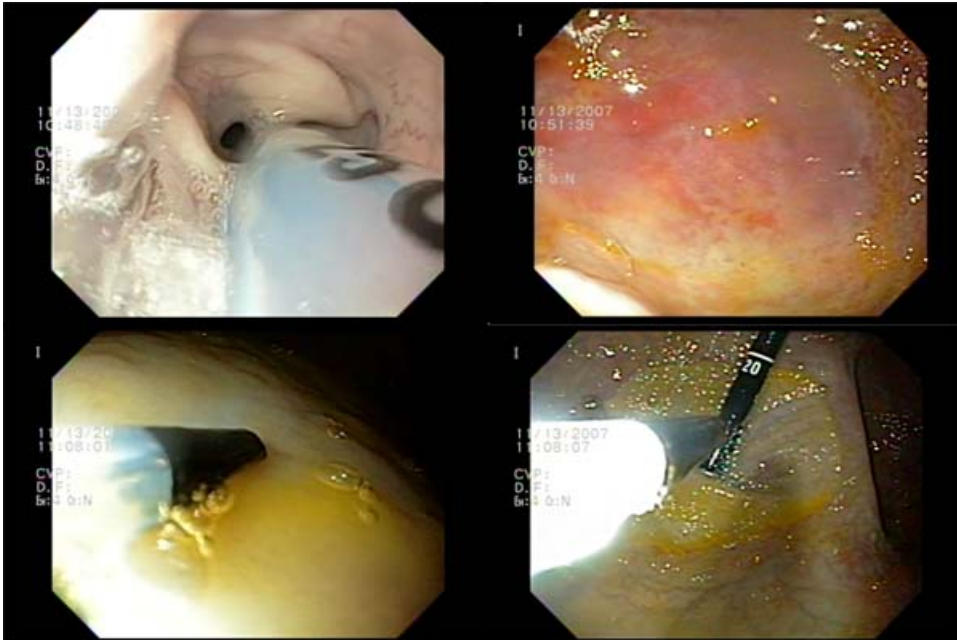Visit our GI Education website at www.hopkins-gi.org.

Objectives – **Pre-Conference Symposium**

After attending this activity, the participant should be able to:

1. Briefly summarize the principles and evidence for the evaluation and treatment of gastrointestinal neoplasia using currently available and novel endoscopic imaging modalities and minimally invasive therapies

2. Demonstrate basic and advanced techniques of endoscopic imaging and therapies for gastrointestinal neoplasia through live endoscopic procedures

3. Obtain the hands-on experience for gastrointestinal and surgical endoscopists for confocal endomicroscopy, endoscopic mucosal resection, endoscopic submucosal dissection, radiofrequency ablation, cryotherapy, EUS-guided therapy, and natural orifice transluminal endoscopic surgery (NOTES)

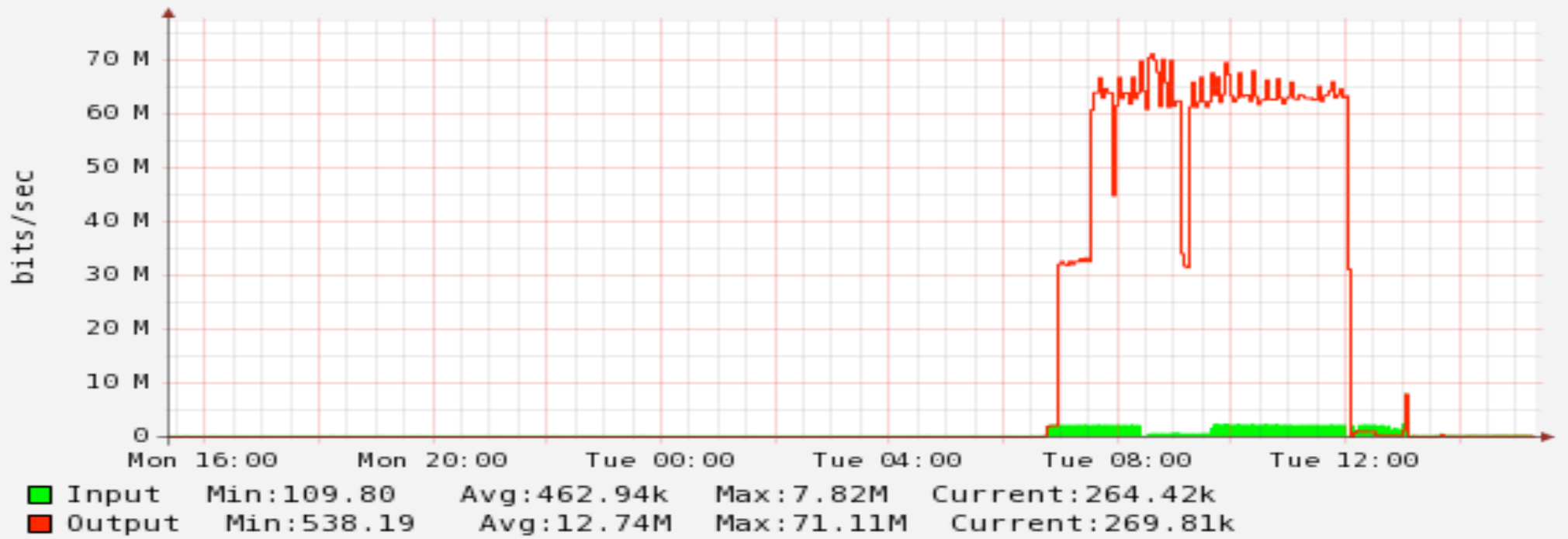# Streaming of Endoscopic Videos to Johns Hopkins Hospital

Streaming of Endoscopic Videos to Viva la Vida Symposium

Streaming of Endoscopic Videos to Viva la Vida Symposium

HPCf-Intercontinental I/O Statistics
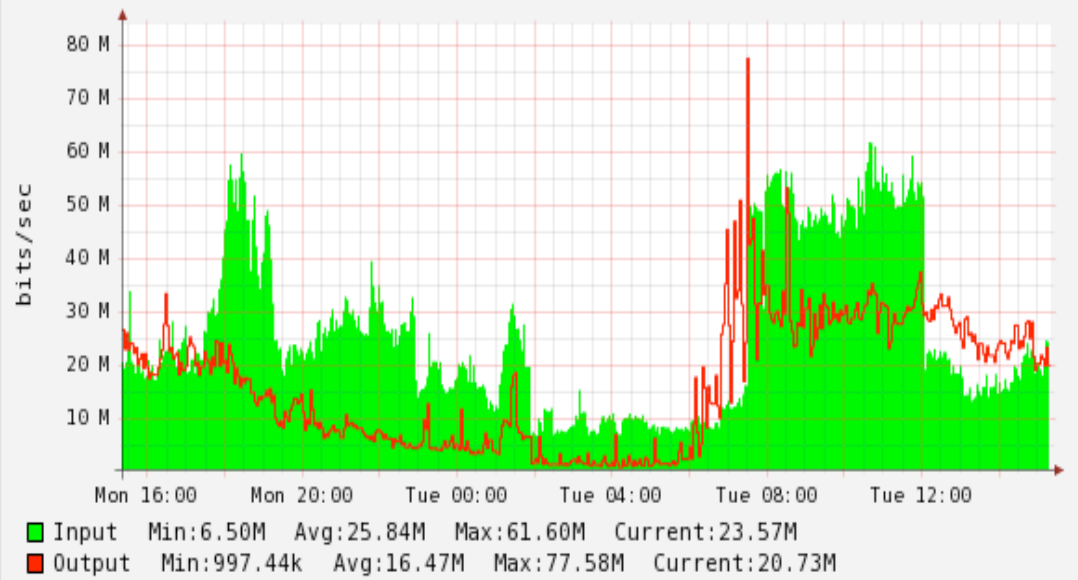

■ Input	Min:109.80	Avg:462.94k	Max:7.82M	Current:264.42k
■ Output	Min:538.19	Avg:12.74M	Max:71.11M	Current:269.81k

FIU/Internet2(GE) I/O Statistics

■ Input	Min:4.78M	Avg:21.83M	Max:61.70M	Current:25.41M
■ Output	Min:9.57M	Avg:22.96M	Max:40.63M	Current:24.37M
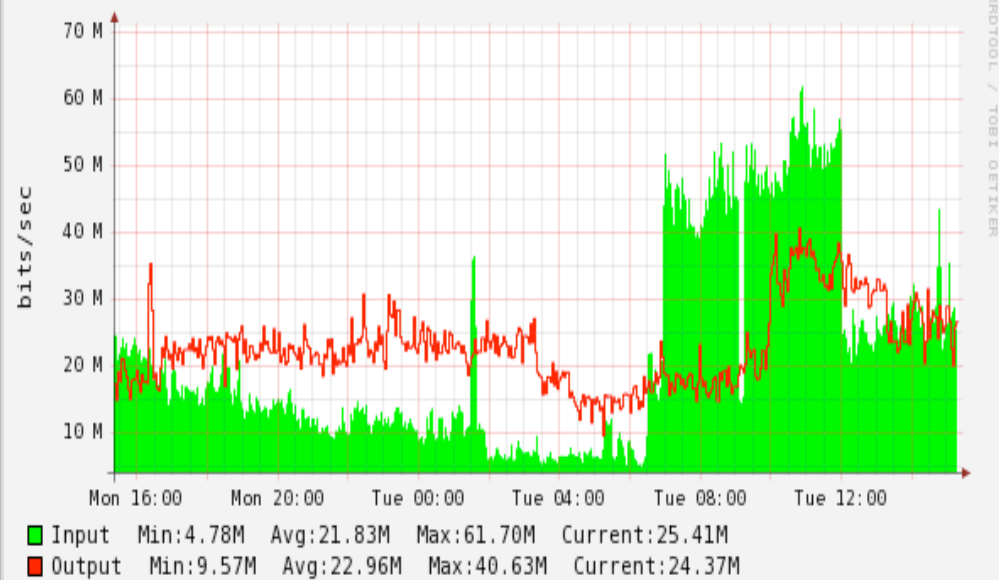
OC3_ATM from RCM I/O Statistics

■ Input	Min:6.50M	Avg:25.84M	Max:61.60M	Current:23.57M
■ Output	Min:997.44k	Avg:16.47M	Max:77.58M	Current:20.73M

Key Components

- DVTS
  - Open Source
  - Low latency
  - SD resolution
  - Works on 100Mb LAN
  - 30fps
  - Portable

Key Components

- Canopus ADVC110
  - DVTS Compatible
  - Very stable
  - Consistent results

Key Components

- Datavideo SE-500

  - Inexpensive S-Video and composite video switcher

  - Built-in four channel frame synchronizer (TBC's): No genlock required.

  - Manages feeds from more than one instrument/room into only one DVTS feed per site.

  - Two persistent DVTS feeds (one per site) to the hotel to facilitate coordination.

Key Components

- **H.323 Endpoints**

  - Out of the shelf solution for interaction

  - Compact, fits on the operating/procedure room

  - Solves the most overlooked but essential component in a video conference: the audio channel

  - Acceptable video quality for interaction

Key Components

- Codian MCU 4205

  - Extensive conference customization options

  - Easy to do tweaks on the fly via web page

  - Used as a VTC video switcher between sites to minimize disruptions, creating a better experience for the attendants at the hotel

Key Componets

- Skype Chat
  - Out of the shelf functionality.
  - Back channel for technicians.

Key Components

- 4 Telephones

  - One for the site coordinators at each endoscopy site (2) in charge of all the coordination and directions to all technicians and endoscopists.

  - One wireless phone for the general coordinator a the hotel.

  - One cellphone with headset for the event moderator at the hotel.

Acknowledgments