

The Bethlehem Alliance

Facilitating Public Benefit Next Generation Internet Development

Public Benefit Internet Development Efforts: Integrating Technology, Heart and Hope

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Agenda

- **The Promise of Next Generation Internet Videoconferencing**
- **Bethlehem Alliance Objectives**
- **Next Generation Internets**
- **How can an old man with almost no money build a national network?**
- **Investments and Outcomes**
- **What's Next?**
- **How you can help**

The Promise of Next Generation Internet Videoconferencing

- Suspension of disbelief quality levels
- Virtual presence when checkpoints or borders are closed
- **Delivery of essential human services**
 - **Medical intervention, specialist consults**
 - **Medical education**
 - **General education**
- Cross-cultural contacts and understandings
- Rapid and high ROI without application development: almost what we would do if we could be there
- Ubiquitous (Internet) access/availability

Bethlehem Alliance Objectives

- **Promote and facilitate development of a national next-generation (advanced) network, a National Research and Education Network (NREN)**
- **Identify and develop compelling demonstrations: medical intervention & medical education**
- **Promote and use facilitative non-directive development strategies; enable and support the objectives of others**

Next Generation Internets

- **Lots of bandwidth**
- **Exceptionally high quality**
 - Low latency, low packet loss, low jitter
- **New and exotic routing methods**
 - Multicast, IPV6, QOS ...
- **Parallel to commodity Internet**
- **Requisite for high quality videoconferencing**
- **Usually built by a national consortium of universities and research facilities, sometimes government**
- **National networks linked to form global network fabric**
- **Test-beds for developing solutions to current problems**

How can an old man with almost no money build a national network?

- **Lots of Show & Tell**
- **Give away working samples of the technologies**
- **Identify and support early adopters**
- **Develop compelling demonstrations (save lives, babies)**
- **Just enough, just in time, just long enough**
(duct tape, bailing wire and used high quality equipment)
- **Promote a national network development consortium**
- **Attract those with necessary influence and resources**

Investments

- **Investments as of April, 2008**
 - **Twenty-five weeks on the ground, five visits**
 - **Approximately \$95K, including \$35K in donations**
 - **44 months of staff (over-)time**

Outcomes

- **2004:** First known IPVC on Palestinian Internet
- **2005:** Palestinian University Consortium formed, the Palestinian Association for Development of Internet2, PADI2
- **2005:** EU Funded International Connector Installed
- **2006:** PADI2 Bids for National Advanced Network
- **2007:** Caritas Baby Hospital on-line with San Diego Internet2 meeting without a national network
- **2008:** Stable enhanced systems; Caritas Baby Hospital, Al-Shifa Hospital and Al-Quds Open University; experienced staff; medical applications next

What's Next?

- **Continue staff and technology development**
- **Refine solutions to network (jitter) problems**
- **Start high visibility medical consults and education**
- **Explore Advanced NREN versus Commodity ROI issues**
- **Extend connectivity and communities**
 - **Palestine: other hospitals, refugee camp clinics, community and arts centers,**
 - **WNY: universities, colleges, schools, community centers**
 - **International: NGO interests (PCRF, UN, Global Nomads ...)**
- **Work to preserve the European link**
- **Start work on Palestinian Healthcare consortium?**

How you can help:

- **Help with costs, make tax deductible contributions**
- **Provide medical consults**
- **Provide medical education**
- **Support this activity at local universities and colleges**
- **Help with other types of demonstrations**
 - **Arts**
 - **Community and cross-cultural contacts**
 - **General education**
 - **Whatever your imagination inspires**
- **Help us drive this towards the resources and influence needed to construct a Palestinian NREN**

Thank you.

Please follow-up with any interests:

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Web Sites of Possible Interest

- **Palestinian Association for Development of Internet2**
 - <http://www.padi2.ps>
- **Internet2**
 - <http://www.internet2.edu>
- **Dante/GEANT**
 - <http://www.dante.net/>
- **EUMEDCONNECT (EU International Connector)**
 - <http://www.eumedconnect.net/>
- **Caritas Baby Hospital**
 - <http://www.kinderhilfe-bethlehem.ch/en/khb>