



# **One Laptop Per Child to Standard Video Conferencing Gateway**

**Bob Dixon, OARnet and Ohio State Univ.**

**Gabe Moulton, Ohio State Univ.**

**Nicholas Thompson, Ohio State Univ.**

**Taewoo Kwon, Ohio State Univ.**

**Internet2 Conference**

**April 28, 2009**

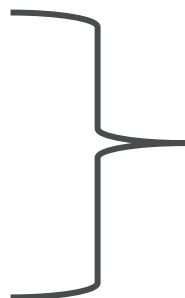
**Arlington, VA**

# The One Laptop Per Child Program

- **Started at MIT by Nicholas Negroponte in 2007, as a non-profit, humanitarian, educational program.**
- **Provides low cost PCs (about \$140 each) to children in third-world countries.**
  - **Computer is called XO.**
  - **Operating system is called Sugar.**
  - **Child-friendly.**
  - **Unix based.**
  - **Open source.**
- **Applications developed by volunteers worldwide.**
- **About 565,000 PCs are now in the hands of children.**

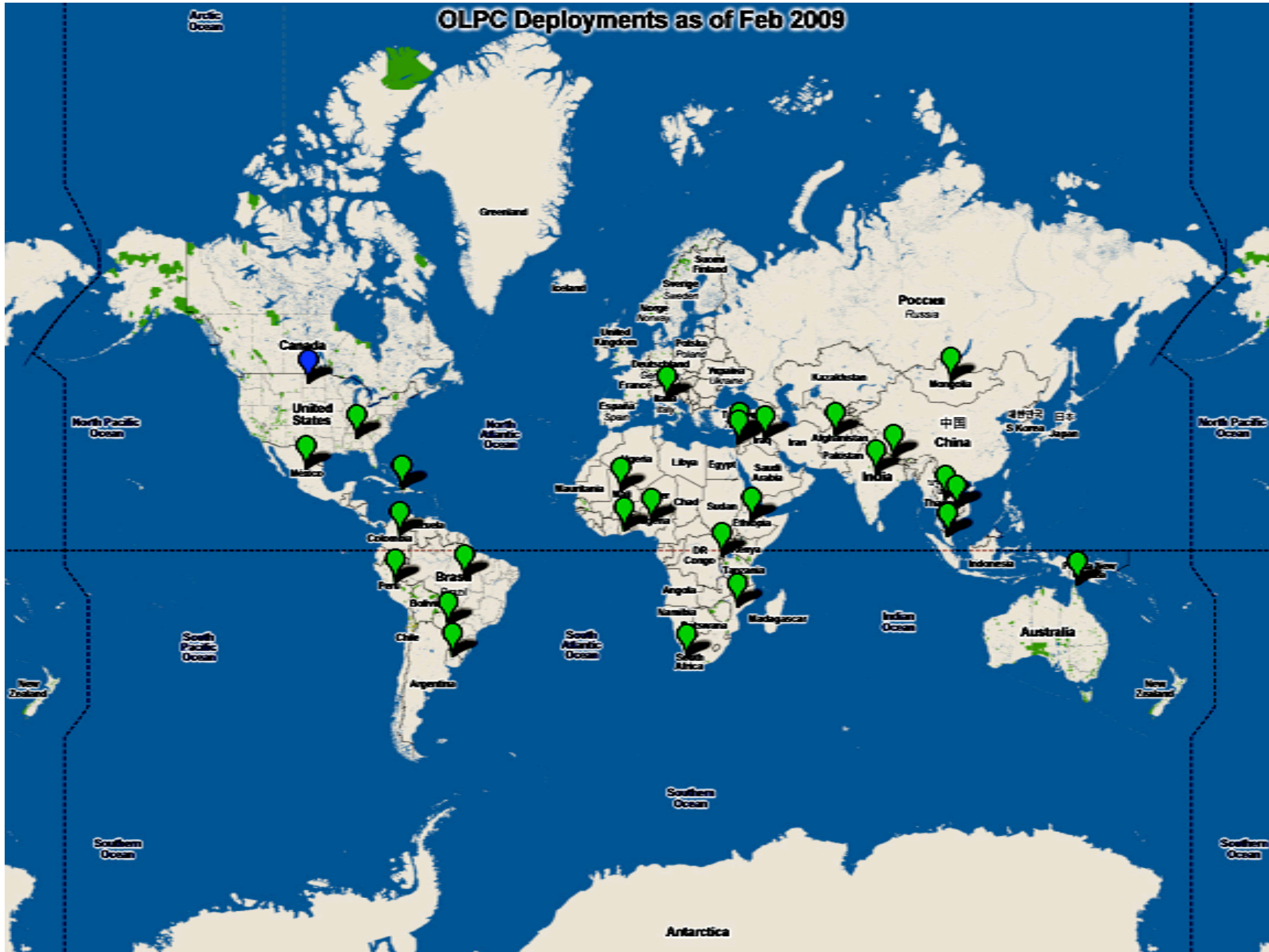
# Current OLPC Deployments

- Uruguay 202,000
- Peru 145,000
- Mexico 50,000
- Alabama 14,000
- Haiti 13,000
- Afghanistan 11,000
- Mongolia 10,000
- + 18 more countries, with fewer numbers



**70% of total is Hispanic**

# OLPC Deployments as of Feb 2009



## Why is this gateway needed?

- There are vast amounts of educational materials available on the Internet, from hundreds of providers.
- Nearly all of this is in industry-standard H.323 format.
- OLPC PCs are too weak to connect to standard video conferencing or Skype.
  - 433MHz.
  - 256K memory.
- A gateway is needed to enable OLPC users to access the repository of Internet educational materials.

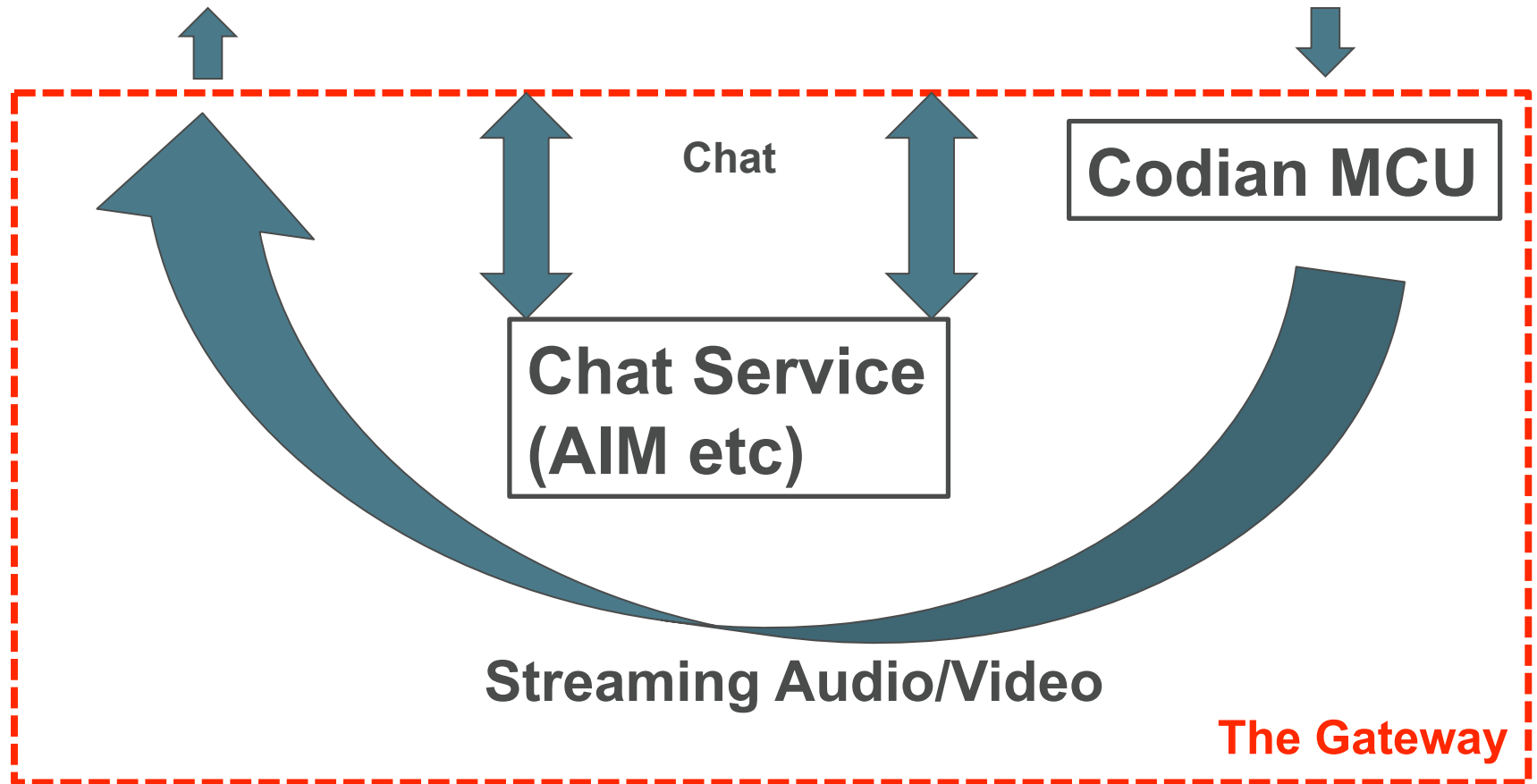
# Current Status of OLPC/H.323 Gateway

- **Version 0.1 is now in operation at Ohio State University, with streaming video to the PCs and bidirectional chat in parallel as the discussion channel.**
- **It is available for testing, demonstration and evaluation, and we are seeking collaborators in the OPLC community.**
- **It can support multiple OLPC and H.323 users at the same time.**
- **Slides must be sent as the primary video, rather than separately such as with H.239.**
- **The OLPC PCs do not support connecting to a projector, so we have added that capability as well. But very slow frame rate. A document camera works much better.**

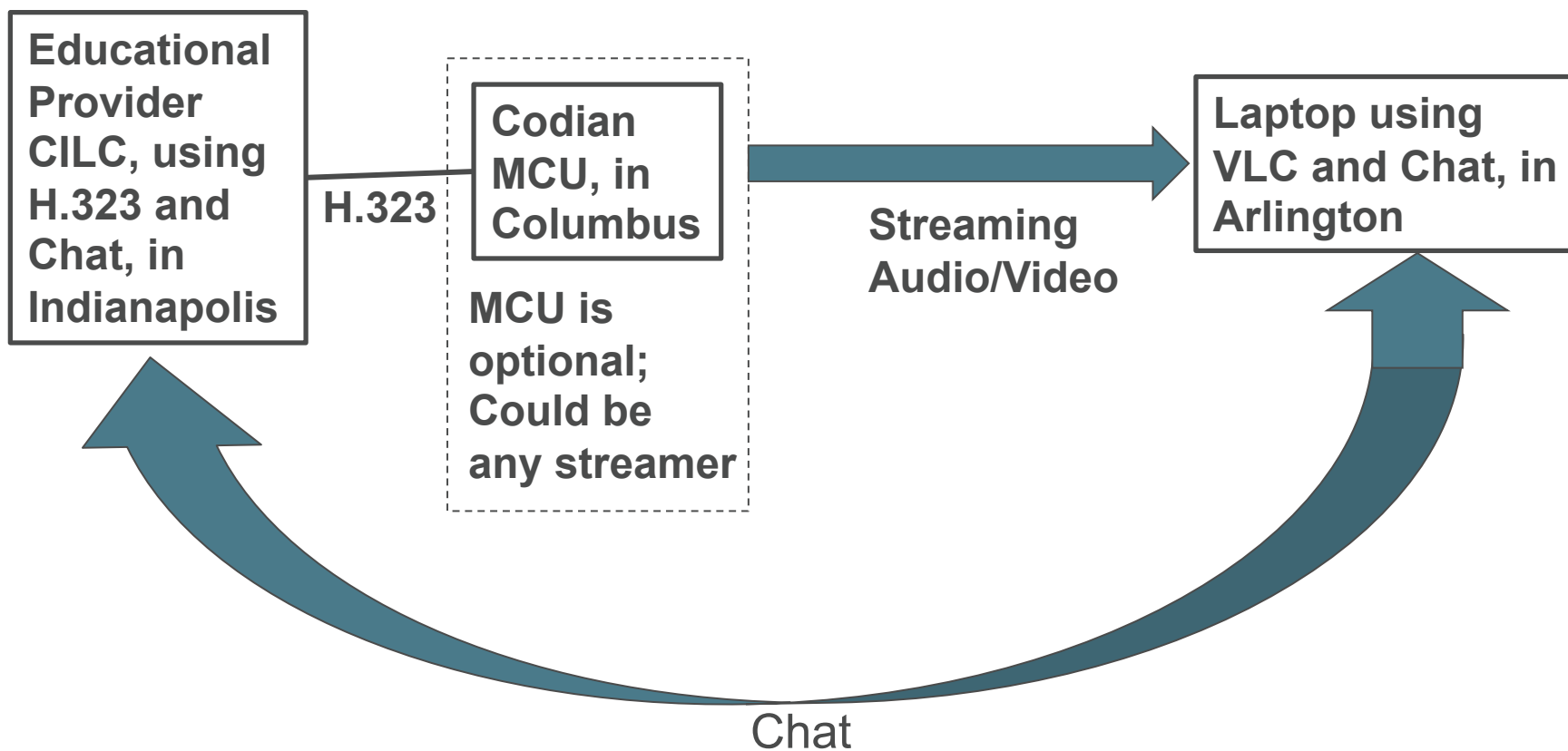
# How the OLPC/H.323 Gateway Works

OLPC user on the Internet

H.323 user on the Internet



# OLPC/H.323 Gateway Demonstration





# Future Plans for the OLPC/H.323 Gateway

- **Locate an OLPC user community to work with.**
- **Test and evaluate with actual students and teachers.**
- **Make any needed changes.**

**Questions?**

**Thank you for coming!**