Masters at Manhattan & More:
Music Distance Learning since 1996

TeknoDida 2011Seminar

Christianne Orto

Associate Dean & Director

Recording & Distance Learning

September 2011 Orivesi

Christianne Orto Manhattan School of Music Distance Learning

Manhattan School of Music *Distance Learning*

Manhattan School of Music

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Manhattan School of Music

- International Conservatory of Music (1918)

- Offering BM, MM and DMA in Classical & Jazz Music

- 900+ students from 34 countries

- 350 Faculty

- 400 students in Precollege Division (5-17)

- 400+ Public Concerts/Year

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Manhattan School of Music

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Elman Distance Learning Studio

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Why Music Distance Learning?

- Expand the reach of the musical arts –heighten global community's awareness & participation in the arts.
- Extend Outreach & Community Engagement.
- Build new or "untapped" audiences for music performance.
- Create new teaching opportunities.
- Develop new performing opportunities.
- Import and export artistic resources for educational purposes and to expand curricular opportunities and options.
  - Learning is Global! Access the best!
- Explore potential revenue sources.
- Build institutional profile, awareness & exposure.
- Re-imagine the music profession in 21st century digital landscape.

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Pick One!

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Core Philosophy & Technologies

- *Live*, interactive audio-visual communication in virtual environment. (I.e., "Synchronous")
  - Connect, *Interact*, Listen, Learn

- Virtual Environment not intended to replace face-to-face learning but rather to expand modes of communication and learning.

- High quality Virtual Learning Environment (VLE) for Effective Learning.

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Core Philosophy & Technologies

- Integration of **standards-based**, interoperable collaboration video solutions in real time (H. 323 Protocol)
  - *Music Mode with Polycom*
  - *Pedagogical Tools versus Social Media Tools*
- Group-based videoconferencing or "Telepresence"

- Desktop/software-based videoconferencing (CMA)

- Simultaneous live webstreaming to desktops and mobile devices
  - www.dl.msmnyc.edu/live

- Video on Demand (Digital Library for Sustained Learning)
  - www.dl.msmnyc.edu/archive or www.dl.msmnyc.edu/user

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Thomas Hampson | Distance Learning @ Manhattan School of Music - Mozilla Firefox

File   Edit   View   History   Bookmarks   Tools   Help

Thomas Hampson | Distance Learning @ Ma...   +

http://dl.msmnyc.edu/events/2011/february/14/thomas_hampson

Google

Most Visited   Google   MSM Intranet   MSM Online   MSM WebMail   TrustFax

Vocal Master Class
February 14th, 2011 at 4:00 pm Eastern in Miller Recital Hall

program   bios   scores

suggested studies

audio recordings

Charles Ives (1874-1954)

"In the Alley"
from *Five Street Songs*

The Greatest Man

Robert Mellon, *baritone (student of Mignon Dunn)*
Rebecca Stager, *piano (student of Kenneth Merrill)*

Gustav Mahler (1860-1911)

"Scheiden und Meiden"
from *Lieder und Gesänge*

Ricky Ian Gordon (b. 1956)

Daybreak in Alabama

Chelsea Friedlander, *soprano (student of Maitland Peters)*
Jung Eun Lee, *piano (student of Kenneth Merrill)*

John Duke (1899-1984)

"Luke Havergal"
from *Four Poems by Edwin Arlington Robinson*

"Miniver Cheevy"
from *Four Poems by Edwin Arlington Robinson*

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What this is not!

- Web Chat (ichat, Skype, etc.) with webcam
- Web 2.0 (wikipedia, blogs, social networking)
- e-learning or asynchronous distance learning

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And how do we connect?

Internet

or

Internet 2

Internet2 Network

ciena | INDIANA UNIVERSITY | infinera | Juniper NETWORKS | Level(3) COMMUNICATIONS

Seattle WA
Portland OR
Rieth OR
Boise ID
Tionesta CA
Ogden UT
Rawlins WY
Sacramento CA
Reno NV
Eureka NV
Salt Lake City UT
Heartwell NE
Omaha NE
Albany NY
Syracuse NY
Boston MA
Buffalo NY
San Francisco CA
Sunnyvale CA
Denver CO
Chicago IL
Detroit MI
Cleveland OH
New York NY
Pittsburgh PA
Philadelphia PA
San Luis Obispo CA
Kansas City MO
St. Louis MO
Indianapolis IN
Washington DC
Los Angeles CA
Raton NM
Tulsa OK
Louisville KY
Phoenix AZ
Albuquerque NM
San Diego CA
Rancho de la Fe NM
Nashville TN
Raleigh NC
Charlotte NC
Tucson AZ
Dallas TX
Atlanta GA
El Paso TX
Birmingham AL
Valentine TX
Mobile AL
Jacksonville FL
Sanderson TX
Baton Rouge LA
San Antonio TX
Houston TX
Tallahassee FL

Internet2 Regeneration and Add/Drop site
Internet2 Redundant Drop/Add Site
ESnet Drop/Add Site
Internet2 Optical Switching Node
Internet2 Router Site

3ROX
CENIC
CIC OmniPoP
Drexel University
GPN
Indiana GigaPoP
KyRON
LEARN
LONI
MAGPI
MAX
MCNC
Merit Network
MREN
NOX
NYSERNet
Oregon Gigapop
Pacific Northwest GigaPoP
SoX
University of Memphis
University of New Mexico
USF/FLR
University of Utah/UEN

CONNECTORS

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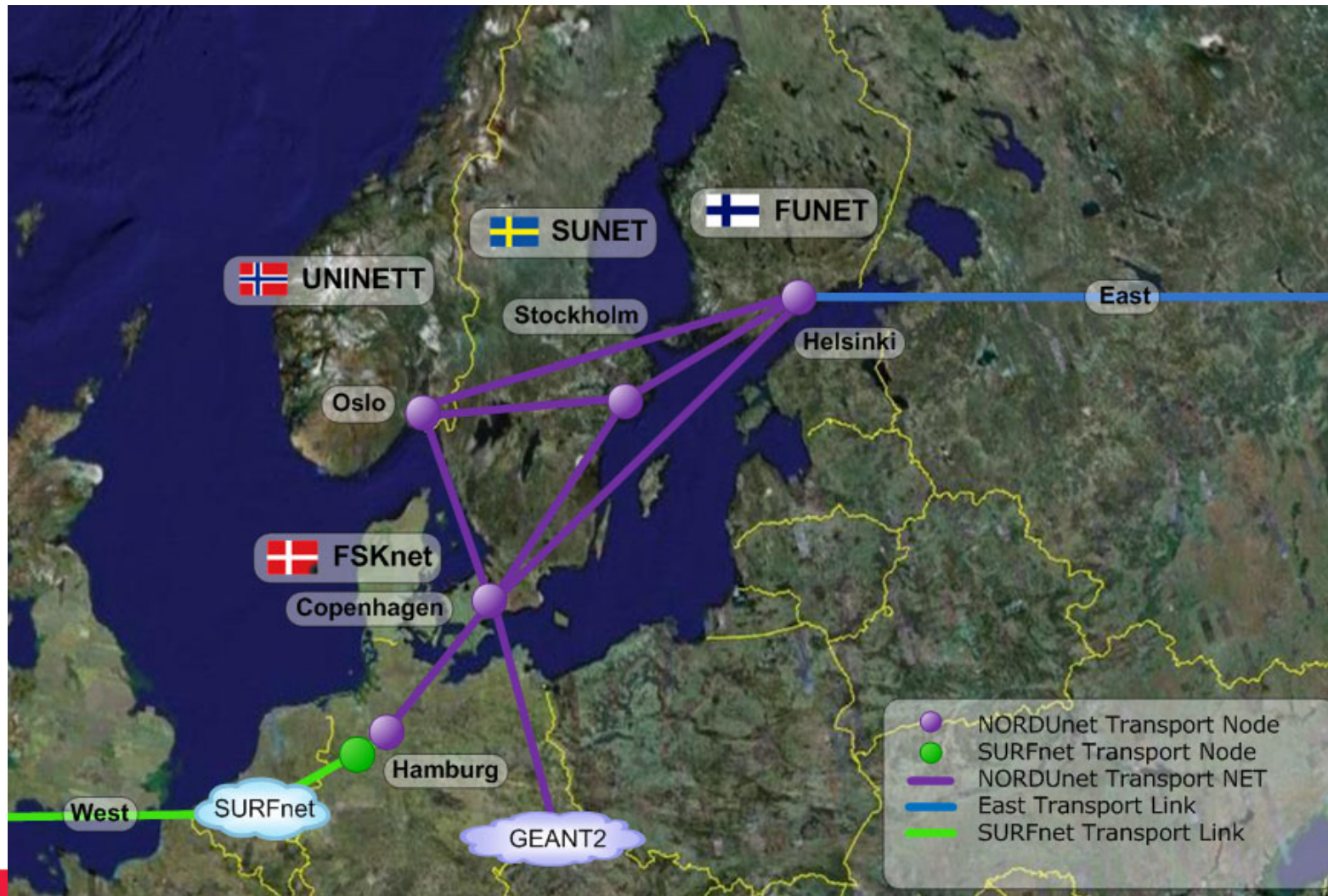Christianne Orto Manhattan School of Music Distance Learning

Community-Powered Cyberinfrastructure for Leading-Edge Research
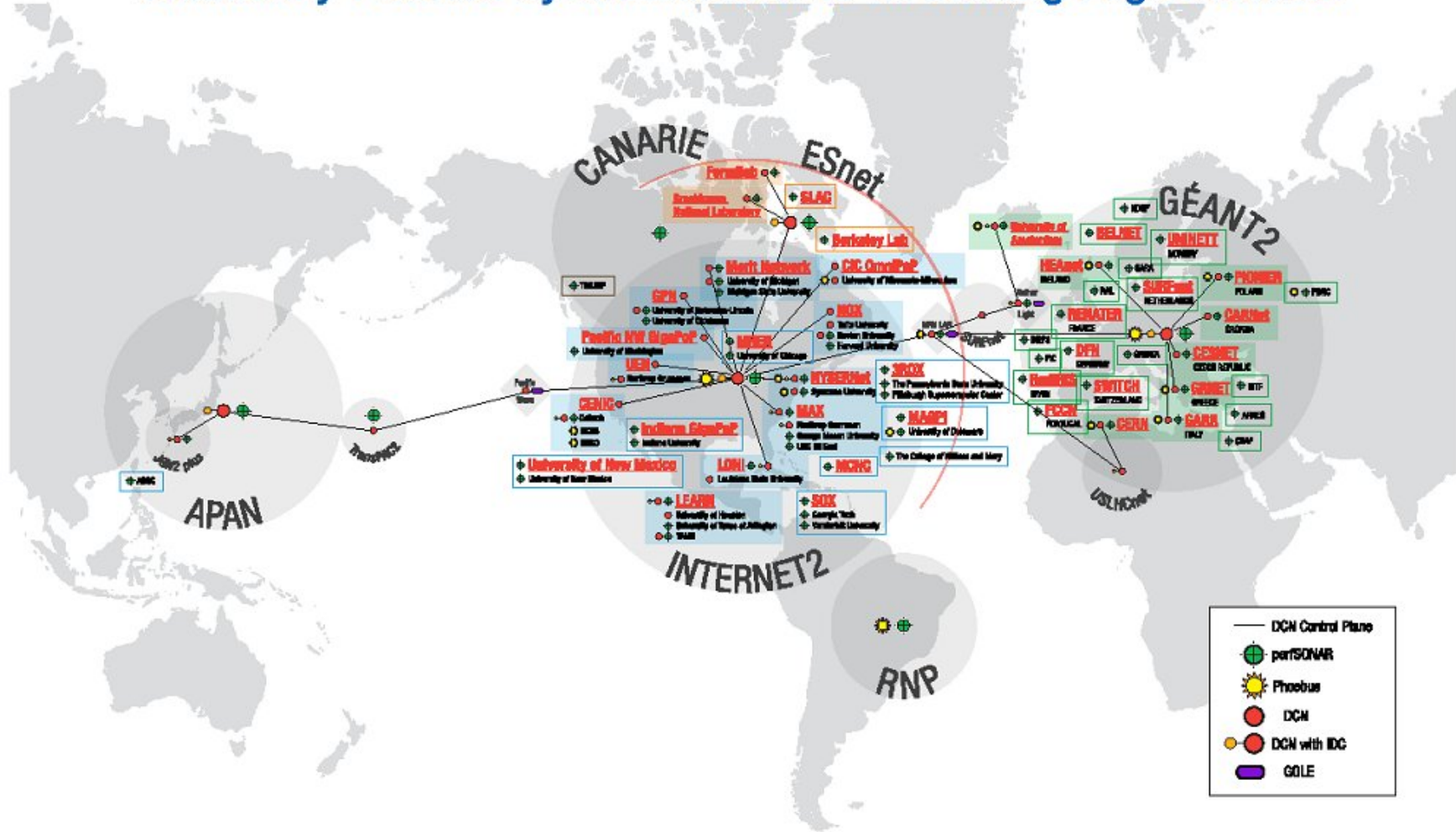
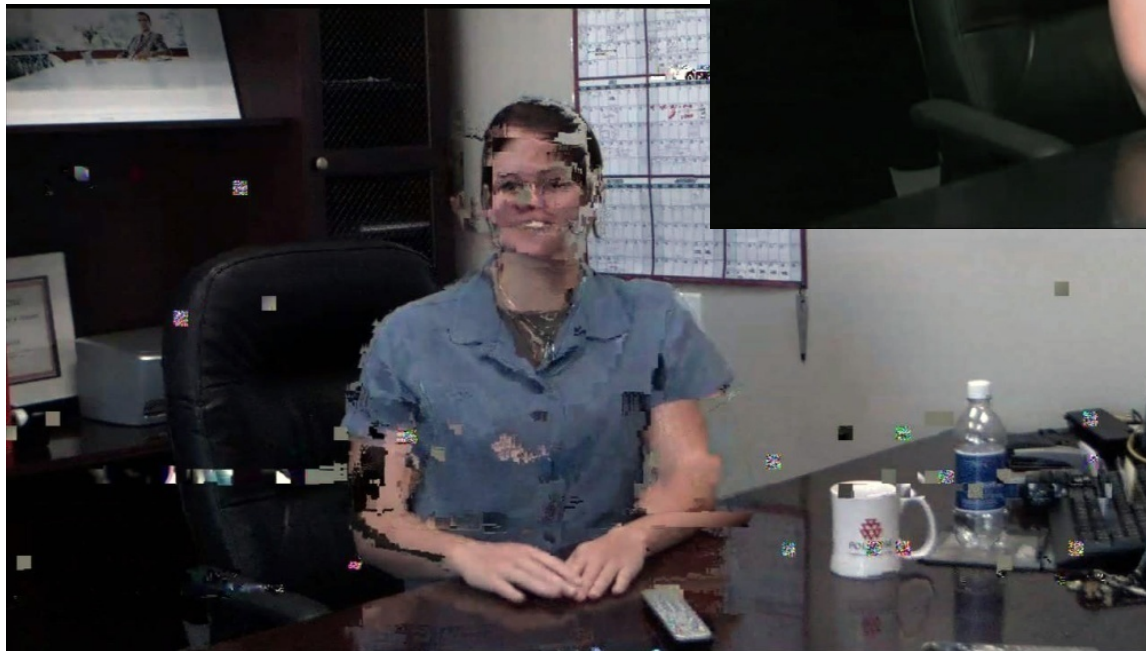Christianne Orto Manhattan School of Music Distance Learning

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NORDUnet

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Internet vs. Internet2
Webchat versus Telepresence

MSM Distance Learning Beginnings

- 1996

- 1st Conservatory in United States

- Maestro Pinchas Zukerman & President Marta Istomin

- Concept: Access & Accommodation

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Program Content

Types of Music Applications

- Masterclasses
- One-to-One Lessons
- Clinics
- Coachings
- Workshops
- Professional Development
- Composer Colloquia
- Sectionals
- Educational & Community Outreach

Musical Theater Masterclass

Conducting Seminar

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Program Content

Types of Music Applications

- "Telementoring"
- Recruitment Demos
- Remote Auditions
- Mock Auditions
- Panel Discussions
- Humanities Exchanges
- Webcasting

Jazz Masterclass

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MSM Distance Learning 2011 Program Scope

- www.dl.msmnyc.edu

- Program to expand curriculum both for MSM students and learners throughout the world.

- 34 of 50 States

- 19 Foreign countries

- 2500 students/each year

- Wide-adoption from MSM Faculty
  - Orchestral Program, Jazz, Voice Departments

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Collaborators, Partners & Participants

- Conservatories, Colleges, Universities

- Performing & Presenting Organizations

- K-12 Schools

- Libraries, Hospital, Community and Senior Centers

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Distance Learning Partnerships

- **United States:**
- *Manhattan School of Music*
- *Eastman School of Music*
- *Cleveland Institute of Music*
- *Northwestern/Bienen School of Music*
- *Northern Illinois University*
- *New World Symphony*
- *Chicago School of the Performing Arts*
- *University of Chicago, School of Music*
- *North Carolina School of the Arts*
- *SUNY Binghamton, School of Music*
- *Peabody Conservatory of Music*
- *University of Oregon, School of Music*
- *University of Southern California, Thornton School of Music*
- *University of Delaware, School of Music*
- *Curtis Institute of Music*

- **International:**
- *Australia National Universiy, School of Music*
- *Kronberg Academy, Germany*
- *Norwegian Academy of Music*
- *Royal Academy of Music, UK*
- *Royal College of Music, UK*
- *Royal Scottish Academy of Music and Drama*
- *Royal Danish Academy of Music, DKDM*
- *McGill University, Canada*
- *Sibelius Academy, Finland*
- *University of Augsburg, School of Music, Germany*
- *Glenn Gould School/Royal Conservatory/Toronto*
- *Shanghai Conservatory*
- *Beijing Conservatory*
- *Yong Siew Toh Conservatory of Music, National University of Singapore*
- *University of Capetown, South Africa*
- *New Zealand School of the Arts*
- *Rubin Academy of Music, Israel*
- *Mount Royal Conservatory, Alberta*
- Tech de Monterey, Mexico

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Distance Learning Partnerships

- **Orchestras/Performing & Cultural Arts Centers: (National/International)**
- Philadelphia Orchestra
- London Symphony Orchestra
- Canada's National Arts Centre
- Carnegie Hall
- Orchestra of the Yucatan
- Interlochen School of the Arts
- Library of Congress, Music Division
- Spokane Symphony Orchestra
- Seoul Institute of the Arts

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Building Partnerships
(within-without)

- Distance Learning Advisory Committee (2005)
- Internet2 Day at MSM-April 2007
- Internet2 Arts & Humanities and K20 Initiatives
- Nysernet (New York State)
- www.CILC.org
- Regional Educational Cooperative Demos

- Regional DL & Ed Tech Conferences
- ED Conferences—Superintendent/Principal Conferences
- EEZ-Consortium of Content Providers and End Users
- E-Marketing Materials/Patron Mail/New Website
- Search Engine Optimization-Keyword Searches

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Distance Learning Programs
for MSM Students
www.dl.msmnyc.edu/students

- **Learning**
  - Zukerman Performance Program
  - Hampson Telementoring Project
  - Masters at Manhattan Online
  - *Manhattan on the Rideau* Jazz VTC Series
  - Digital Library
- **"Teaching Artist" Training:**
  - Educational Outreach Partnership
  - Arts-in-Education & the Virtual Classroom
  - Doctoral Seminar in Music Distance Learning

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Classical Programs with Manhattan School of Music

Pinchas Zukerman
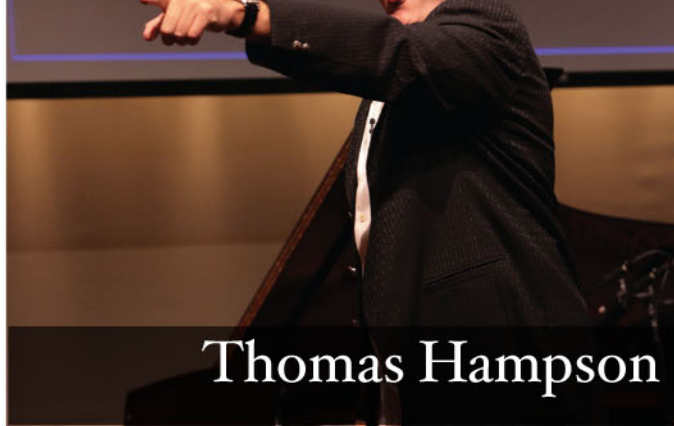
Thomas Hampson

Orchestral Performance

Piano Performance

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Chamber Music

Jazz Programs with Manhattan School of Music

Kenny Barron

Dave Liebman

Jazz Programs

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Student Life/Performance

Student Life/Performance

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MSM Distance Learning Programs for external content delivery

Faculty–Based Instruction

•Global Conservatory

•Music Bridges

Teaching Artist/Alumni-Based Instruction

•Virtual Music Studio

•Music Outreach Videoconference Exchange

CILC
PINNACLE
AWARD
Honorable Mention
2010-2011

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MSM Distance Learning Programs

K–12 Distance Learning Offerings @ Manhattan School of Music

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Connect.
Interact.
Listen.
Learn.

We deliver live musical and educational experiences directly to your classroom. Our offerings are interdisciplinary, creating links between music and core subjects such as social studies and history.

FOR MORE INFORMATION:
View the attached course catalog, visit www.msmnyc.edu/special/distancelearning, or contact Juliana Han at jhan@msmnyc.edu, 917 493 4488.

K–12 Distance Learning @ Manhattan School of Music

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Distance Learning @ Manhattan School of Music

THE GLOBAL CONSERVATORY
VIDEOCONFERENCE PROGRAM OFFERINGS

Manhattan School of Music offers institutions around the world the opportunity to engage in group lessons, private instruction, and ensemble coaching, as well as academic and professional seminars, with our world-renowned faculty. Interactive videoconference sessions are available with artist-teachers who are among today's most sought-after teachers and performers.

INFORMATION

For further information please contact:
Christianne Orto, *Distance Learning Program Director*
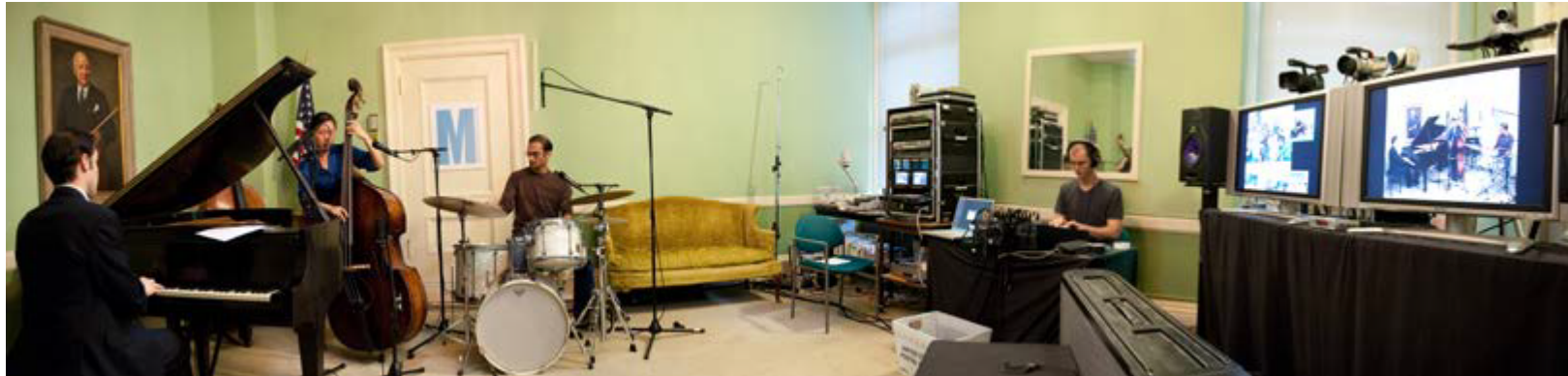917 493 4401
corto@msmnyc.edu

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MSM Teaching Artists!

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K-12 Outreach-Music Outreach Videoconference Exchange

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K-12 Outreach: Virtual Studio

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K-12 Outreach: Virtual Studio

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Music Bridges

Music Bridges

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Global Conservatory

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MANHATTAN SCHOOL OF MUSIC and the SHANGHAI CONSERVATORY

DISTANCE LEARNING PARTNERSHIP

JUNE 2007

Glenn Dicterow

Justin DiCioccio

1:14

Robert Sirota

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Virtual Teaching Environment using Telepresence Technology

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Music Requirements

- Structural Elements of Music:
  - Melody; Harmony (pitches); Meter (rhythm); and Form (composition)

- Expressive Elements of Music: (Interpretive)
  - Timbre, Dynamics, Tempo, articulation, texture with contrasts & changes therein

Music Requirements

- Transparent & seamless virtual environment conducive to learning/teaching. (Low–Latency)
    - Highly dynamic multisensory experience
- True, accurate sonic representations of the acoustical properties of sound and music.
    - Full-frequency response (50 Hz-22 Khz) or > full human auditory bandwidth
    - Stereo Sound

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MSM-Polycom Collaboration

Music Mode

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Issues & Challenges

- Limited Frequency Bandwidth (7 Khz)

- Mono sound

- Low bit-rate sound quality (8-bit)

- No Dynamics or Dynamic range

- Loss or absence (muting) of sound

- Network & Codec Latencies or delays

- Acoustic Echo Cancellation Artifacts

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What is Music Mode?

- Disabling and adapting software code:
  - Automatic Gain Control (Dynamics)
  - Noise Fill (Avoiding Silence!)
  - Noise Suppression (Eliminating Low Level Sound)
  - Adaptive Stereo Echo Cancellation Algorithm for Music
  - **White Paper: "Music Performance over High-Speed Networks" by Christianne Orto and Stefan Karapetkov (2008); Updated June 2011**

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Educational Benefits of VLE

- Focal Point engenders concentrated intensity and immersion
- Multiple Perspectives & Focal Lengths
  - Fine/Gross Motor Movements in HD
- Concept of "Objectivity" versus "Subjectivity"
  - Dual Monitor System
- Composite Video Archive-extended learning
  - Distributed Tagging

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Educational Benefits of VLE

- Constructivist Learning through Experiential Learning Model
- Authentic Voice or Primary Source
- "Electronic Fieldtrip" Phenomena
- Peer Mentorship or "Mirroring"

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Virtual Teaching Environment Pedagogical Best Practices

- Communication Style: Highly Interactive & Dynamic
- Content: Exploit Multimedia/Instructional Technologies
  - Multiple camera perspectives/multiple monitors
  - DVDs, CDs, Powerpoint, Scores, Internet in addition to verbal and musical communication
- Creating Community-names, identifiers, connections, relatedness.
- Classroom or Session Management: collaborative process.

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Digital Library

THE GLOBAL CONSERVATORY   K-12 & COMMUNITY PROGRAMS   REGISTER

Lesson Archive
Robbins Catalog
Zukerman Archive
Create content
Biography
Event
Event Archive
Page
Quote
Repertoire
Video Cuepoint
Administer
My account
Log out

XHTML
CSS

Create Video Cuepoint

Enter a brief note about what this cuepoint refers to.

For example, if a student asks about interpretation of a solo passage, a good entry might look like:
"Jane Doe asks about interpreting the solo from Brahms' Op. 12"

☑ Show summary in full view

Note:

▸ Input format

References

Try to find information in the database to which this cuepoint refers.
If the information doesn't exist in the system, create a new entry by clicking the green plus.

Person:

Enter performers, presenters, etc...

Add another item

Repertoire:

Music Distance Learning
Here and on the Horizon

- Home Learner/Lifelong or adult learner (via CMA(D))
- Remote Audition Centers
- Expansion of Partnerships globally
  – Statewide Contracts/Equipment Loaner Program
- Video on Demand-secure web access/Searchable via metadata with distributed tagging www.dl.msmnyc.edu/user
- www.dl.msmnyc.edu/archive with additional educational resources
- Mobile Streaming to Handheld devices
- Special Needs Learning
- Research-Pedagogical Studies
- Building collaborative communities of educators

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Music Anywhere, Anytime:

International Symposium on Synchronous Distance Learning

www.issdl.org

October 5th & 6th, 2011

12 p.m. to 4 p.m. GMT

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Twitter: msm_dl

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Siren 22—On the Road to Standardization

- ITU-T G.719 full-band codec approved in May 2008
  - Based on Polycom Siren™22 and Ericsson's advanced audio
  - G.719 number assigned for higher visibility
- ITU-T cited the strong and increasing demand for audio coding providing the full human auditory bandwidth
  - Conferencing systems are increasingly used for more elaborate presentations, often including music and sound effects
  - In today's multimedia presentations, playback of audio and video from DVDs and PCs is becoming a common practice
  - New Telepresence systems provide High Definition video and audio quality to the user, and require high-quality media delivery to create the immersive experience
  - Extending the quality of remote meetings helps reduce travel which in turn reduces greenhouse gas emission and limits climate change.

Audio Codec Highlights

	Bandwidth	Bit rate	Delay	Complexity	Standard	Algorithm
SIREN22	22 kHz	32-64 kbps mono 64-128 kbps stereo	40 ms	18.4 MIPS	N/A	Transform
G.719	20 kHz	32-128 kbps mono 64-256 kbps stereo	40 ms	17.7 MIPS	ITU	Transform
MP3	≤ 20 kHz	64-384 kbps	≥ 54 ms	> 100 MIPS	ISO	Transform
MPEG-4 AAC-LD	≤ 20 kHz	24-192 kbps (TAA: 64 kbps mono 128 kbps stereo)	≥ 20 ms	> 130 MIPS	ISO	Transform

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