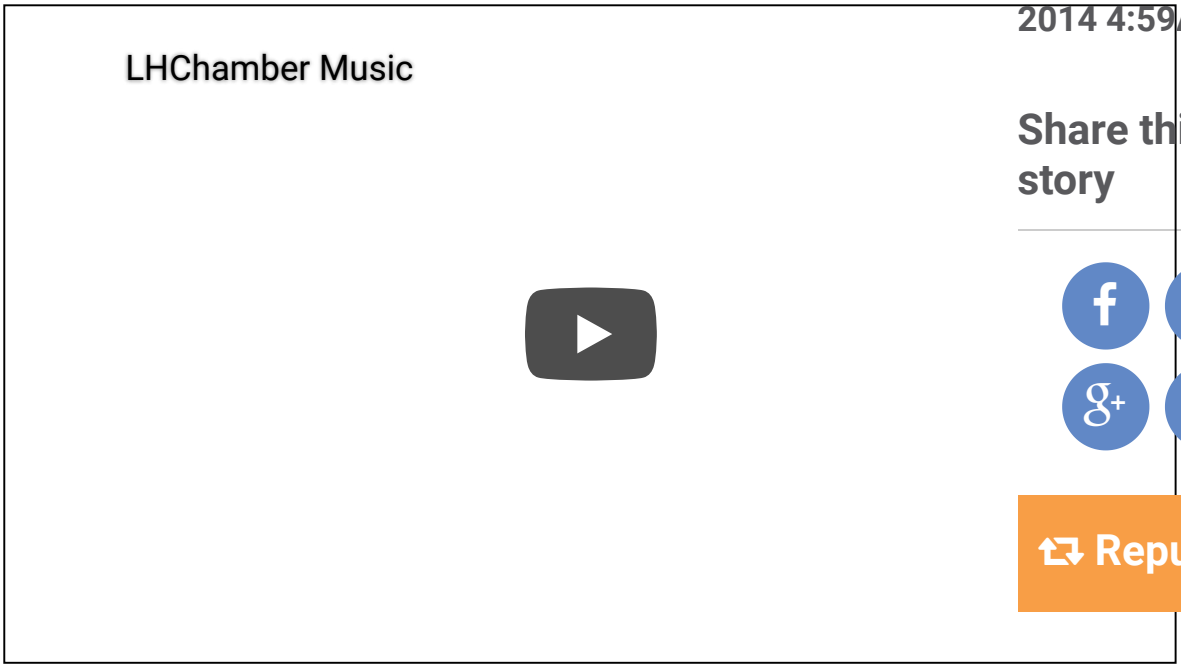
Celebrating CERN with the sounds of science



"Having musicians playing underground was a fantastic idea from Paola Catapano, CERN science communicator and the producer of the video," says Vicinanza. Video courtesy Paola Catapano, Piotr Traczyk, and Domenico Vicinanza.

Posted on OCT 8 2014 4:59AM

Domenico Vicinanza has already used data sonification to create several innovative musical compositions, including using data from NASA's Voyager probes, brain scans, and volcanoes. Now, he's sonified data from the ATLAS, CMS, ALICE, and LHCb experimets on CERN's Large Hadron Collider. The piece was commissioned as part of the celebrations for the 60th anniversary of CERN.

"The sonification method used to create this piece works by associating a musical note to each measurement coming from the experiments," says Vicinanza, who is network services product manager at the pan-European research and education network GÉANT, where he also has the role of arts and humanities manager. "The resulting melody is then an actual presentation of the

scientific data, just using sounds instead of coloured dots."

Concert given by the European Union Youth Orchestra, directed by Maestro Vladimir Ashkenazy. Image courtesy CERN.

Vicinanza also sonified the text of the CERN Convention, which was signed back in 1953 and led to the establishment of the organization a year later. He translated this text into a long melody by mapping each character of the text to a musical note, according to its position within the English alphabet. "Data sonification can be a quite intensive process and creating the melody from the text of the CERN Convention relied on the pan-European GÉANT network, which operates at speeds of up to 100 gigabits per second, and the EGI grid computing infrastructure," explains Vicinanza. "Grid computing is one of the 'power tools' behind

the discovery of the Higgs boson. It is also a precious tool for data sonification since it enables several mappings to be explored at the same time."

- Andrew Purcell

Join the conversation

Contribute

Do you have story ideas or something to contribute? **Let us know!**

OUR UNDERWRITERS

Thank to you our underwriters, who have supported us since the transition from International Science Grid This Week (iSGTW) into Science Node in 2015. We are incredibly grateful.

View all underwriters

CATEGORIES

Advanced computing
Research networks
Big data
Tech trends
Community building

CONTACT

Science Node
Email:
editors@sciencenode.o
Website:
sciencenode.org

GIVE NOW