



# INNOVATING COLOSSEO: ART AND SCIENCE COME TOGETHER OVER THE NETWORK

Archaeology and fiber-optics, theatre and networking; ultra-high definition for actors and musicians participating from distant locations; past, present and future come together in a digital environment. Thus the inauguration of the fiber-optic connection to the GARR network of all the sites of the Superintendency for the Rome Archaeological Area becomes a unique event with the performance of "La Nave Argo" by director Giorgio Barberio Corsetti in the Aula Ottagona of the Baths of Diocletian.



“A leap into the future” commented Superintendent Francesco Prosperetti, “which shows us how the network is not only a tool for researchers but also a key enabler of the creative spirit”.

The event was an opportunity for the cultural heritage community to come together and discover how the potential of ultra-broadband comes alive through the vision of an internationally acclaimed artist. Says Corsetti, “I was curious to explore the possibilities of a poetic approach to concepts of presence and absence in different places, and how this would reflect on perceptions of time and space.”

A space which, like the network, has no borders, bringing together four remote locations (Baths of Diocletian, Colosseum, Crypta Balbi and the INFN National Laboratories in Frascati) onto a single stage. “The theatrical spectacle lives off its components which are a temporal duration and a space;” explains Corsetti, “we have challenged both these notions.”

This relation between archaeological locations and experimental research underscores the added value of a multi-disciplinary network such as that provided by GARR, which is first and



foremost a network of people. GARR director Federico Ruggieri describes a challenging and greatly satisfying experience. “As is often the case, when everything works the public does not notice the significant technical work that goes into it, but this is the value of a network that is ‘transparent’ for its users”.

The performance required an ultra-high definition video stream with extremely low latency, setting up two locations with the LoLa (Low Latency) software developed by GARR in collaboration with the Tartini Music School in Trieste. Preparations took about a month and saw the collaboration of multimedia experts from the GARR Netcast community.

The collaboration between GARR and the Superintendency is deeply rooted. “Ours is truly a Special Superintendency,” says Prosperetti, “we have many sites in our organization, and sharing data and applications is part of our daily life. As an example, the National Roman Museum is distributed over four sites, so having them joined with ultra-broadband connections is essential to our research”.

There are already several highly innovative projects, such as the SITAR system, which relies on GARR for connectivity, storage and digital identity management. It is a multi-dimensional digital archaeological survey, based on an open source platform for the benefit of the entire community.

In other areas there is still work to do, for instance, in establishing collaborations with other institutions: “The technology is ready but not the mindset,” observes the Superintendent. “In the United States it is normal for

researchers and academics to access their museums’ databases not just for research but also for teaching purposes. I would like to extend access to our enormous wealth of resources, they are extraordinary and unique items that should be shared through collaborations with universities and schools”.

Prosperetti also speaks of digital infrastructures to enhance tourism: “We must provide high quality content to promote thoughtful tourism. We prefer that tourists arrive with some prior knowledge of our monuments, so they come not merely to be amazed but also to gain a deeper knowledge. In this way the network is not just a physical tool but also an indicator of our civility, as we collaborate with a growing number of institutions to maximize the sharing of knowledge”.

Research, conservation and enhancement of artifacts are thus keywords for the future of cultural heritage, but there is also great interest in the performing arts. According to Federico Ruggieri, “with the great potential of fiber-optics the only limits are those of the imagination. Today we opened an avenue and we will continue to support people from the performing arts community who wish to explore these techniques for their performances”.

Corsetti offers a thought from the artistic perspective as well as that of creating new languages: “traditional culture is sometimes the domain of a restricted elite. The experience with “La Nave Argo” raises a number of questions and opens up new possibilities that speak to a new audience”.

#### Words

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#### Pictures

Left Credit: Edoardo Angelucci, GARR

Right Credit: Stefano Cavese