

1. Introduction

1.1 Introducing Telematics

Welcome to this video tutorial about Telematic Performances, produced by our research group at Zurich University of the Arts.

Telematic performances, also called network performances, connect performers (be it musicians, dancers, actors, etc.) situated at two or more geographically distributed locations. They are connected by communication technologies that enable live interaction.

Telematics – a combination of telecommunication and informatics – is a term which emerged in the late 1970s and which was mainly used in the field of logistics and traffic management.

With the establishment of the World Wide Web, first developed at the beginning of the 1990s at CERN in Geneva, the network technologies were also implemented in the context of the arts. Forms like net art, net artists, network performance, cyberperformance and distributed choreography were more frequently used in the art field. However, these newly established forms should not be simply reduced to the availability of an international digital network.

Telematics in Science Fiction

The idea of enabling audio-visual communication between far spread locations has long been a major pursuit in scientific and technological innovation. One turning point came in 1875 with the telephonoscope by Thomas Edison, which has influenced numerous visions in fictions in art as well as in technology.

For example, Jules Verne's presentation "Une ville idéale" from that same year, imagined a pianist playing simultaneously in Amiens, Beijing, London and St. Petersburg.

In his 1890 novel "La vie électrique", Albert Robida, seemed to anticipate 21st century online teaching formats, it describes a student in a Swiss mountain village attending classes at the Universities of Zurich and Paris. Or, in this vision of the year 2000, dating back to the famous Paris world exhibition of 1900, Jean-Marc Côté depicted a situation not far from today's video chats.

Let us look at this picture more closely: numerous elements in the setup are actually still essential in today's network connections.

Firstly, the technical setup plays an essential role in each project.

Secondly, the screen on wheels shows the flexibility in staging the remote space;

And thirdly, the relaxed conversation of the actor in the foreground underlines the imagination of being in the same space as the distant person despite the highly sophisticated technology.

From Science Fiction to Science Facts

What these science-fiction authors from the 19th century imagined indeed became reality in the 20th and 21st century. The use of communication networks for telematic performances in the field of art began in the 1970s with musical works by Dieter Schnebel or Maryanne Amacher and continued in the 1980s with seminal works by new media artists like Bill Fontana, Kit Galloway and Sherry Rabinowitz

These artists used radio infrastructures, at the time powerful ISDN telephone lines or even satellite networks to pursue their artistic visions.

Telematic formats became more common with the advent of the Internet in the 1990s and with 'Internet 2.0' in the 2000s, infrastructures which provided the necessary throughput for the streaming of audio and video data.

A wide variety of artistic practices that have endeavoured to connect dislocated stages for live interaction, have since evolved, as have 'telematic' communities in the fields of music, theatre, dance, or media arts.

1.2 Introducing the Team

Beginning in 2013, the Zurich University of the Arts initiated a research Project in the field of the Telematic Performance Format – "TPF".

During our research and practice, we encountered many questions raised by this complex format, and from technological and from the artistic side. Therefore, we built an interdisciplinary team, consisting of expertises from music, theatre and dance as well as from technology and programming. Today, it consists – in alphabetical order – of Benjamin Burger, Joel De Giovanni, Martin Fröhlich, Roman Haefeli, Patrick Müller, Johannes Schütt, Hannah Walter and myself, Matthias Ziegler.

The Research Project is embedded in the ICST, the Institute of Computer Music and Sound technology at Zurich University of the Arts and is supported by the Swiss National Science Foundation.

We also thank all collaborating parties spread around the world for having showed the willingness to organize and perform telematic performances with us and to use and test our tools. We appreciate being a part of this vivid community.

1.3 Introducing the Course

In this video tutorial, we give you some insights and good practice tips, making it possible to use and apply the technologies for your own practice, and also giving some orientation towards its aesthetic dimensions.

In the following chapter, we give you some basic information about the technology and the logic of bidirectional streaming.

Chapters three – on audio – and chapter four – on video – introduce you to the use of our telematic tools for easy jamming, but also for more complex settings. Together with the manuals that you find on our internet page, networkperformance.space, you will be able to apply the technologies for yourself and for your artistic practice.

The final chapters are devoted to artistic dimensions, we present some findings which we have developed in our practice during the last few years.