

## Chapter 3.12

# Enabling Virtual Music Performance Communities

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### ABSTRACT

The chapter provides an overview of virtual music communities focusing on novel collaboration environments aiming to support networked and geographically dispersed music performance. A key objective of the work reported is to investigate online collaborative practices during virtual music performances in community settings. To this effect, the first part of the chapter is devoted to reviewing different kinds of communities and their corresponding practices as manifested through social interaction. The second part of the chapter presents a case study, which elaborates on the realization of virtual music communities using a generic technological platform, namely DIAMOUSES. DIAMOUSES

was designed to provide a host for several types of virtual music communities, intended for music rehearsals, live performances and music learning. Our recent experiments provide useful insights to the distinctive features of these alternative community settings as well as the practices prevailing in each case. The chapter is concluded by discussing open research issues and challenges relevant to virtual music performance communities.

### INTRODUCTION

Undoubtedly, music forms a popular application domain for diverse application and services. Although collaboration has always been a key element in music expression, however the social interaction in virtual music communities is mostly circumferential

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to music creation or music expression itself. In their majority, these communities are concerned with information exchange of existing music works. The collaborative tasks in these communities are concentrated on file sharing, information exchange on news, events and releases, popularity monitoring, information retrieval of music trends etc (Poblocki, 2005). In contrast with these well developed music communities of practice, this chapter presents recent achievements in the area of Network Music Performance (NMP) and attempts to portray virtual communities in which music content is dynamically created on the fly and shared among remotely located music associates.

Although there is a large debate on the origins of dislocated music performance, it appears that the first attempts in performing music through computer networks dates back in the late 1970s and are associated with the commercialization of personal computers in the United States (Barbosa 2003). Due to the technological constraints presented in network music performance, the advancement of music performance communities has been somewhat belated. However, current advances in network technologies have encouraged a variety of novel applications and services that are related to performing music through the network. A number of systems have emerged both in research as well as in commercial contexts. These systems raise the issue of community oriented behaviour throughout network music performance. In these communities the collaborative purpose may range from professional stage performances to social music making, such as music improvisation and jamming.

The main objective of this chapter is to elaborate on the collaboration practices supported across music performance communities and to propose new techniques for enhancing the publicity of these communities. Clearly, the most outstanding constraint that hinders the evolution of virtual music performance communities is the technological barrier of the unavailability of appropriate network infrastructures to support them. However, prog-

ress of the last few years in this area of research shows that performing music through networks is becoming feasible in the near future.

The rest of this chapter is structured as follows. The next section presents an overview of the currently and near future supported virtual communities of practice in music. A classification of these communities is attempted on the basis of the purpose of their collaboration. This classification is followed by a discussion on the modes of collaboration and the diverge requirements for supported practices in the different types of music communities. The section that follows provides insights on realizing music performance communities, based on the recent outcomes of an ongoing R&D project, namely DIAMOUSES. Finally, the chapter concludes with a discussion on open issues and prominent perspectives in virtual music performance communities.

## **VIRTUAL COMMUNITIES OF PRACTICE IN MUSIC**

This section provides an overview of the state of the art research on virtual music communities and the practices prevailing in different scenarios and collaborative settings. It attempts to provide a classification of these communities based on their purpose, or more precisely, on the expected outcome. The proposed classification is based on the assumption that social interaction in music communities varies depending on the purpose of collaboration. Therefore the practices supported by the corresponding virtual environment should be different depending on the type of the community they aim to support.

### **Types of Music Communities**

Investigating the purpose set for virtual music communities, five distinct types of music communities may be discerned, namely, music sharing communities, audience communities, performance

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