Social Music Making on the Web with CODES

Evandro Miletto, Marcelo Pimenta
I. Informática - UFRGS
CP 15064, 90501-970 Porto Alegre - RS, Brasil
{miletto,mpimenta}@inf.ufrgs.br

Jean-Paul Sansonnet, François Bouchet
LIMSI-CNRS
BP 133, 91403 Orsay cedex, France
{jps,bouchet}@limsi.fr

ABSTRACT

Music making is usually considered as mostly a solitary activity done by composers, but with the current Web 2.0 technology it is possible to provide new possibilities for social music making. CODES is a Web-based networked music environment designed to support music creation by novices in a cooperative and prototypical way, since no previous musical knowledge is required. Differently from others social media, where people only publish their content created elsewhere, in CODES novices can draft and refine cooperatively simple musical pieces, actually creating their own music, instead of only consuming it. This paper presents the main characteristics of CODES for social music making, with special focus on novices in music.

Categories and Subject Descriptors

H.5.3 [**Information Interfaces and Presentation**]: Group and Organization Interfaces

General Terms

Human Factors

Keywords

Web, Cooperative Musical Prototyping, Ordinary Users.

1. INTRODUCTION

Music was probably the first type of rich media to really go "Web 2.0" and it's become a pretty popular place for startups. As a result, there are some great Rich Internet Applications built around social sharing of music.

Indeed, the Web is helping music by bringing new opportunities even for non-musicians. Since YouTube and other social Web services such as MySpace, and Flickr have improved the interaction between users and systems over the Web, users are getting used to new purposes, like engagement and self-expression, turning themselves the passive user into an active producer of content. In this sense, ordinary users could have the opportunity of making musical experiments feeling like expert users empowered by RIA.

By the way, Web systems for experimenting with music should also provide ways to "create" contributions and experiments. For this reason, we have developed CODES, a Web-based environment for cooperative music prototyping for musical creation by novices in music. We consider CODES as a system for music design (authoring of contributions), instead of a system just for publishing music. Through CODES, non-musicians may have the opportunity to be - like musicians - the actors of their own musical experiences, drafting simple musical pieces called Musical Prototypes - MP. This paper aims at overviewing how it is possible for ordinary users creating and sharing their own music on the web, like actors of their own culture: the social music.

2. HOW NOVICES CAN MAKE MUSIC?

First of all, we assume that music is an artistic product that should be designed as a consequence of a prototyping and cooperative process. Knowing these process we can, then, develop the CODES environment to provide support to the collective music creation, which is defined as *Cooperative Musical Prototyping Process* - CMP.

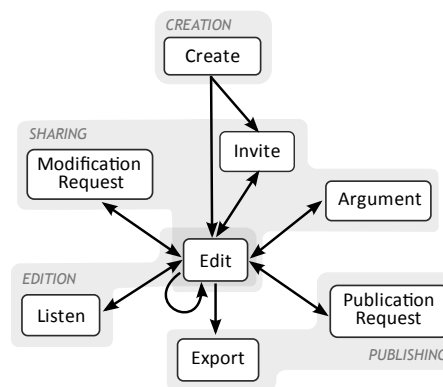See the Figure 1 for a graphical illustration of the process.

Figure 1: Cooperative Music Prototyping Process

Thus, CMP is a simple cyclical process including the following main activities: a) *musical prototype creation*, b) *musical prototyping edition*, c) *musical prototyping sharing*, and d) *musical prototyping publishing*.

Musical prototyping creation means to start on new musical piece in which a user can name and add textual characteristics in order to be identified by the group and by Web users, if shared or published in the CODES home page. After created, the MP may be edited, i. e., the MP elements can be placed to compose sequences and combinations of sounds, for which no music theory is required.

Musical prototyping edition Edition implies the selection of some pre-existing sound patterns from a sound library, in order to group them in a arbitrary way (i.e where and how the user wants) in the editing area. Moreover, activities such as to insert, remove, resize, and change the order of sound patterns are also available for users. Some examples are represented in some regions of the Figure 2.
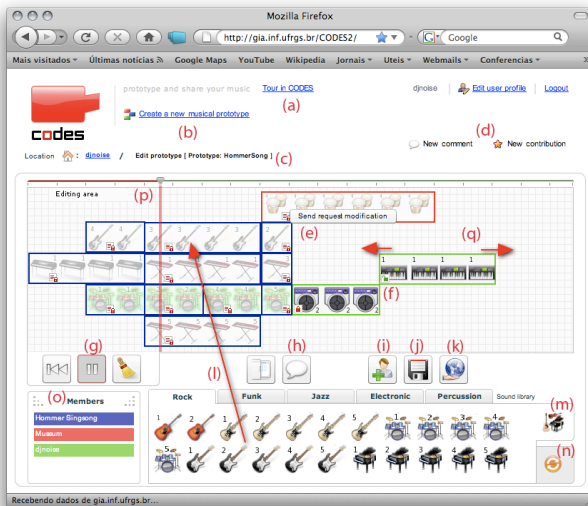

Figure 2: Music prototyping edition in CODES

Users may listen to the sound patterns (four-seconds-size MP3 files) by clicking over them at the sound library (m) before drag-and-drop (i) into the editing area. The manipulation includes activities such as changing the sound pattern position, expand and collapse (q), delete (g), block and unblock (f) them. Users can save the work (j) for further edition. At any time, users can listen to the whole musical prototype (g) and write arguments (h), which may be linked to all decisions/activities made on it, in a structure similar to a design rationale structure.

Musical prototyping sharing allows the prototype **creator** (called the *prototype owner*) to send **invitations** to CODES members and to non-members, asking them for cooperation. Thus, all prototype partners may discuss and change ideas about each step of the prototype refinement. In fact, arguments (h) and modifications, which the log is identified in (n) of a prototype are equally considered as typical contributions in a cooperative musical prototype. To change others' contributions (disabled by default), users can send a *modification requests* (e) and wait the approval. Another option to share their music is to export (download) their musical experiments in MP3 files.

Musical prototyping publishing (k) means to publish the MP in the CODES home page in order to make it avail-

able for Web users. A *publication request* can be sent to the group as an alternative to manage this process.

Considering that CODES design is novice-oriented, it needs to provide a very specific kind of support and is typically based on the need of *prototyping* and *cooperation* activities [2].

Thus, **Novices Need to Prototype** drafting simple musical pieces (MP), which can be tested, modified, and repeatedly listened to, in a cyclical refinement of initial musical sketch until a final stage being reached. This process clearly resembles prototyping cycles adopted in industry, then it seems natural and straighforward adopt a prototypical process usually adopted in design activities.

Novices Need to Cooperate because they do not have enough knowledge and confidence to create music by themselves. They need to experiment based on trial and error, which is the essence of prototyping and of the design. This process is noticeably a particular kind of Human Centered Collaborative Design where the result of design is a MP[1].

3. CONCLUDING REMARKS

Some evaluation, conducted through different HCI approaches (Heuristic Evaluation [3] and User Testing [4]), aimed at discovering interface and interaction drawbacks, and also about the overall acceptation of musical activities and collaboration. We have had a general approval of the CODES audience (in a restrict academic[1] context until now), showing that the CODES goal has been successfully achieved.

CODES has shown that Web-based networked music environments can offer even more than "consumer" possibilities for social music making.

Having integrated and adequate tools, processes, and concepts in one single environment, anyone can create musical prototypes, effectively cooperate, and experience the feeling of being the creators of their own musical culture.

Music creation by novices is ultimately about people having fun and entertainment (and maybe also learning), not about following a fixed set of rules for music composition. Indeed, CODES is free for everyone that agree with the idea of creating (and discussing about) music together. It is in fact a matter of sharing not only the 'results" of music making process but the "process" itself.

4. REFERENCES

[1] A. F. Hoppe, E. M. Miletto, M. S. Pimenta, and L. V. Flores. Cooperation in musical prototypes design. In *13th IEEE International Conference on Computer Supported Cooperative Work in Design*. IEEE, 2009.

[2] E. M. Miletto, M. S. Pimenta, F. Bouchet, J.-P. S. Sansonnet, and D. Keller. Music creation by novices should be both prototypical and cooperative - lessons learned from codes. In *XI Simpósio Brasileiro de Computação Musical*, Recife, 2009.

[3] J. Nielsen. *Usability Engineering*. CRC Press, Inc., Boca Raton, FL, USA, 1997.

[4] J. Rubin. *Handbook of Usability Testing: How to Plan, Design, and Conduct Effective Tests*. Wiley, April 1994.