

| | |
|--------------|---|
| Title | 音楽的特徴量と作曲者の主観評価の関連性を用いたフレーズ作成支援システムに関する研究 |
| Author(s) | 伊藤, 丈一 |
| Citation | |
| Issue Date | 2008-03 |
| Type | Thesis or Dissertation |
| Text version | author |
| URL | http://hdl.handle.net/10119/4291 |
| Rights | |
| Description | Supervisor:西本一志, 知識科学研究科, 修士課程 |

A supporting system for composing musical phrases by using relations between musical features of the phrases and a composer's subjective evaluations

Joichi ITO

School of Knowledge Science,
Japan Advanced Institute of Science and Technology
March 2008

Keywords: musical feature, creativity support, interaction, subjective evaluation

Many cheap and easy-to-use tools for music composition allow people to enjoy music composition. Generally, a piece of music is composed based on some theme. However, it is actually difficult for a novice composer to create phrases that meet the theme as well as his/her taste and he/she often reaches a deadlock. In this paper, I propose a supporting system for music composition, named “mu-cept,” which helps break out the deadlock.

Mu-cept is always observing MIDI Input. If user stopped creating phrase, mu-cept requires user's ambiguous subjective evaluation of created phrases. Evaluation items are two. One of items is user's subjective taste. The other item is theme. User's subjective evaluation is mapped on the graph by user's mouse click. Whenever the phrase is created, mu-cept accumulates phrase data and evaluation. Mu-cept extracts 23 musical features from phrase data. Mu-cept analyzes relations between a user's ambiguous subjective evaluations and musical features of each phrase by a multiple regression analysis, finds some musical features that would lead to more desirable phrases, and shows some hints based on the analysis results to the user.

In a preliminary experiment, three subjects composed some phrases in three environment. First, a subject don't evaluate phrases and no information from mu-cept. Second, a subject composes musical phrase over inputting subjective evaluations. I got some indexes. First, mu-cept show musical tendency of user's phrases. Second, for supporting phrase

composition, mu-cept may show information about musical features with so big Regression coefficient. Representing evaluation of musical phrase force user to experience pain, but efficiencies of representing evaluation of musical phrase was confirmed. User could confirm user's situation.

Before actual experiment, I add new module mu-cept. New module is analyzing module about note module based on key finding algorithm. In actual experiment, two subjects who didn't experience musical composition composed some phrases. Two subjects are beginner of compose, otherwise, mu-cept could support subjects and show new mu-cept's future. Main problem is that informations from mu-cept are often same contents.

Future work is experiment using another subjects .And provement of mu-cept.