Multimedia System for Shakuhachi Tablature

Toshiaki MATSUISHIMA and Kie YAGASAWA
Department of Information Sciences, TOBO University, JAPAN
Email: matsuisima@toho-u.ac.jp

Abstract: Compare to the standard western music notation, the computerization for Shakuhachi tablature is far behind. I have been developing the interactive editing system for the Shakuhachi tablature for four years and new functions are added to it. They are showing fingerings function, sound output function, and file conversion function with Standard MIDI file, etc. By introducing these new functions, the system becomes a multimedia system for the Shakuhachi tablature and can be used as the CAI system for it.

1. Introduction: Shakuhachi is a Japanese traditional wind instrument and a unique tablature is used for performing it. The purpose of this research is to provide computerized circumstance for the Shakuhachi players/composers. The system consists of two sub-systems: a optical recognition system and a interactive editor of Shakuhachi tablature. Shakuhachi tablaure can be input into the computer from both sub-systems. The unique feature of the system is that a combined LCD/tablet equipment provides an interactive tablature editing environment.

I have already reported the basic idea and the configuration of the system in the previous ICMI (Matsuishima 1992, 1993). Some new functions are added to the interactive editor and it is improved to the multimedia system. In this paper, the improved system for the Shakuhachi tablature is described.

2. Features of Interactive Editor: The center of the Fig.1 shows the system’s display. The system adopts the handwriting interface, and all operation to the system can be done by the pen. Operations. The kah (note symbols) and the hyo-sen (chord symbols) are input into the system by writing these symbols on the table. The editor accepts the usual editing commands such as cut, paste, copy, insert and delete. The special commands for the Shakuhachi tablature are also prepared such as to set kah(T), kahh(E), meri, kah, han-onsu, and kah-onsu.

3. New Functions: New functions added to the interactive editor improve the operability of the system. Major new functions are a showing fingerings function, a sound output function, and a file conversion function between Standard MIDI files. Since it takes time to find the incorrect notes from the entire score only by sight, sound output facility is helpful for proof-reading of the edited scores. Furthermore, by seeing fingerig and listening sound simultaneously, it is helpful to understand the Shakuhachi tablature. With these new functions, the system becomes a multimedia system for the Shakuhachi tablature. The LCD tablet device is very useful but still expensive. Then all operation to the editor can be done by the mouse alternatively.

4. Processing Examples: Fig.1 is the expected Shakuhachi tablature processing examples with this system. The system is useful for the people who are not accustomed to the Shakuhachi tablature because the user can see the kah and its fingerig and listen its sound at the same time. As the system has a single kah play mode, the user can review the intended kah repeatedly.

The system is also useful for the Shakuhachi experts. Using the system with the commercially available music software, it is possible to obtain both standard music notation and Shakuhachi tablature from the other. It would be not difficult for the Shakuhachi music players/composers to use this system because the system adopts the handwriting interface. Since Shakuhachi tablatures are written by hand, this user interface is effective for the people in the music field who are not accustomed to computers.
5. **Summary**: This editing system for the Shakuhachi tablature provides various functions for the wide range of users from novice to expert. Although some minor modifications are still required, the development are mostly completed. Further modification will be made under the practical testing results.