

A Study on Utilization of Computer Technology -with a Sequencer Program-

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Abstract. Development of advanced technology is leading to numerous changes in human civilization. Computer industry is growing exponential by means of convenience. Popular music is experiencing tremendous changes as well due to the development of computer technology, and such development is providing innovative convenience in complex music production. Currently, the most frequently used computer music production programs narrow down to Cubase, Logic and Protools, which all have sequencer function in addition to music recording, editing and mixing functions. This study concentrates on analyzing the strengths and weaknesses of Cubase, Logic and Protools.

Keywords: computer, software, Protools, sequencing, logic, Q-bass

1 Introduction

Currently, the most frequently used computer music production programs narrow down to Cubase, Logic and Protools, which all have sequencer function in addition to music recording, editing and mixing functions.

2 Main Subject

2.1 Cubase

Cubase is produced by Steinberg, and has the following strengths. It is compatible in both Mac and Windows, and indicates notes on midi data in key editor screen, which makes midi work and editing very convenient. Also, its code track function is very easy to use that the user can have a general idea of chord progression beforehand.

The Beat Calculator function in Cubase isn't available in Logic, which provides the convenience of learning the tempo of the music when copying the tune, and Time Stretching function minimizes the loss of audio and change the tempo of audio file. And the [e] function by track enables individual control of tracks.

Meanwhile, the basic virtual instrument or effector functions in Cubase are substantially inadequate. Also, exporting midi data into audio is way too complex than Logic. Also, it consists of too many windows that it causes inconvenience in working with one monitor. As someone that encounters computer music for the first time, this complicated display would make it feel difficult. In terms of economic aspect, the cost of program itself is much more costly than Logic.



Fig. 1. Cubase Main Screen

2.2 Logic



Fig. 2. Logic Main Screen

Logic, produced by Apple, has the following strengths. Logic doesn't require a separate setting, but is automatically installed when purchased in App Store. The default virtual instrument and effector functions are as outstanding as high-priced virtual instruments and effector. Also, its bus function is designed conveniently to facilitate in applying effector or setting audio out. Also, the main screen is easier to read than Cubase that it feels easier to handle for beginners than Logic.

In terms of weaknesses of Logic, it doesn't indicate midi note. And its way of expressing velocity is not intuitive that it is more difficult to use than Cubase. It doesn't show control functions at once that it is somewhat inconvenient to use control functions. Also, the virtual instruments and effector share the same method of use that it is inconvenient in using instrument with multi-channels, and since Logic is only compatible with Mac computers, it wouldn't be so inexpensive considering the cost of Mac.

2.3 Protocols



Fig. 3. Protocols Main Screen

Protocols is produced by AVID, and has the following advantages. First, the quality of outcome after editing the audio is far better than other sequencing program. Second, the audio mixer window used in mixing is can be viewed at once that mixing work becomes highly efficient. Third, the automation function is designed to be drawn by mouse and entered as is.

Its disadvantages include that a midi work that can be a simple process in another sequencing program requires multiple processes in Protocols that it makes the work inefficient. Also, the audio editing, although it provides good quality, requires a series of complex processes that it makes the work less efficient. Lastly, in order to use many tracks and various virtual plug-ins, it requires an upgrade to HD version, requires a high cost.

3. Conclusion

There isn't a single program that can satisfy everything. As examined above, each program has its own pros and cons. Therefore, the user needs to select the program that corresponds to one's preference and purpose of use. In case of beginners, it is recommended to focus on one program, rather than using multiple.

Computer music program offers infinite conveniences in music production. However, ultimately, good music depends on the user's musical competence, not the performance of programs.

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