

## HTML5とJavaScriptを利用したWINおよびWIN32形式地震波形ファイル表示

Seismic data viewer on a web browser for WIN and WIN32 format, using HTML5 and JavaScript

\*松澤 孝紀<sup>1</sup>

\*Takanori Matsuzawa<sup>1</sup>

1.独立行政法人 防災科学技術研究所

1.National Research Institute for Earth Science and Disaster Prevention

In Japan, WIN and WIN32 format are widely used to record, collect and store seismic data. Web site of Hi-net, NIED provides seismic data of Hi-net and other institutes in the WIN32 format, which is extended from the original WIN format to handle data from many institutes and networks.

Applications to check and decode this format data are provided from each institute. However, installation is required as these official programs are written in C language. This is sometimes not convenient, for example, in the case of using a temporal environment or travelling outside. Using HTML5 and JavaScript, I have developed a web application which enables us to check the WIN and WIN32 data in various situations.

This application can check the contents of WIN and WIN32 format file and display waveform data. Basic usage of this application is just to choose WIN and WIN32 files using a select button. Then, waveform data is displayed in the panel within the browser. Duration and displayed stations can be selected and changed at the details field within the browsing window. If a channel table file is specified, information of station, component, and physical amplitude is reflected in the panel. WIN system contains some programs to handle the content of a WIN file. "wck" in the WIN system is a tool to check the content of channels. "dewin" in the WIN system is a tool to decode the seismic data of a specified channel from a WIN format file. This web application has similar functions to these two programs, when these operations are specified within the details field. I note that organization ID and network ID information are displayed for WIN32 files. This is a newly added feature to the original "wck" program.

This application is, however, sometimes slow in the case of handling large files which is larger than several tens of megabytes. Memory usage should be improved in the future. In addition, appearance should be also refined for better user experiences.

This web application enables us to view the content of WIN and WIN32 files, using only a single HTML file. As typical recent web browsers (e.g., IE11, Firefox, Chrome, and Safari) supports HTML5 and JavaScript, installation of any other programs is not necessary in such an environment with these browser. In addition, this application also works without internet connection. Copying this html file to a PC is just a necessary preparation to use this program even in that case. This program will enables us to use WIN/WIN32 files in various scenes, and makes WIN and WIN32 format more convenient.

キーワード：地震波形、ウェブアプリケーション、WIN、WIN32

Keywords: Seismic waveform, Web application, WIN, WIN32