

# ChcConverter ver.0.8

# NefConverter ver.0.8

Developed by Hiroyoshi Iwata

ChcConverter is a program to convert clockwise chain-code to counter-clockwise chain-code, and vice versa (counter-clockwise to clockwise). NefConverter is a program to convert clockwise EFDs (i.e., EFDs derived from clockwise chain-code) to converted counter counter-clockwise EFDs (i.e., EFDs derived from counter-clockwise chain-code), and vice versa.

These programs are developed for bridging between data obtained by SHAPE ver.1.2 and ones obtained by SHAPE ver.1.3. Chain-code and EFD data obtained by SHAPE ver.1.2 are clockwise because of the bug found in SHAPE ver.1.2, although they are expected to be counter-clockwise in general. Since the bug has been fixed in SHAPE ver.1.3, chain-code and EFD data obtained by SHAPE ver.1.3 are counter-clockwise. As indicated by Table 1, no serious problem will occur in shape analyses, if all analyzed data are obtained by the same version of SHAPE (ver.1.2 or ver.1.3). The serious artifact, however, should occur in the analyses, if data obtained by the different versions of SHAPE (ver.1.2 and ver.1.3) are analyzed JOINTLY! Thus, it is necessary to align the contour-trace direction of all analyzed data before conducting the JOINT ANALYSIS. The program ChcConverter and NefConverter are developed for aligning clockwise data (i.e., data obtained by SHAPE ver.1.2) to counter-clockwise data (i.e., data obtained by SHAPE ver.1.3).

Table 1. Direction of contour trace and problems in shape analyses

EFD and chain-code Data	Direction of contour trace	Problems in shape analyses	Ways of coping
Data obtained by SHAPE ver.1.2	Clockwise	No problem	Not necessary
Data obtained by SHAPE ver.1.3	Counter-clockwise	Of course, No problem	Not necessary
Combined data obtained by both versions	The mixture of clockwise and counter-clockwise	The difference in the direction of contour trace causes the difference in the sign of Fourier coefficients $b$ and $d$ . This should cause a serious artifact in the analyses	Use <a href="#">converter programs</a> before analyzing the combined data

## How to install ChcConverter and NefCovnerter

1. Download converters.zip from the [web-site](#) of related programs of SHAPE.
2. Extract “converters” folder contained in the zip file.
3. You can move the folder anywhere you want.

## How to use ChcConverter and NefCovnerter

1. Double-click the icon of ChcConverter (or NefConverter) to execute the program.

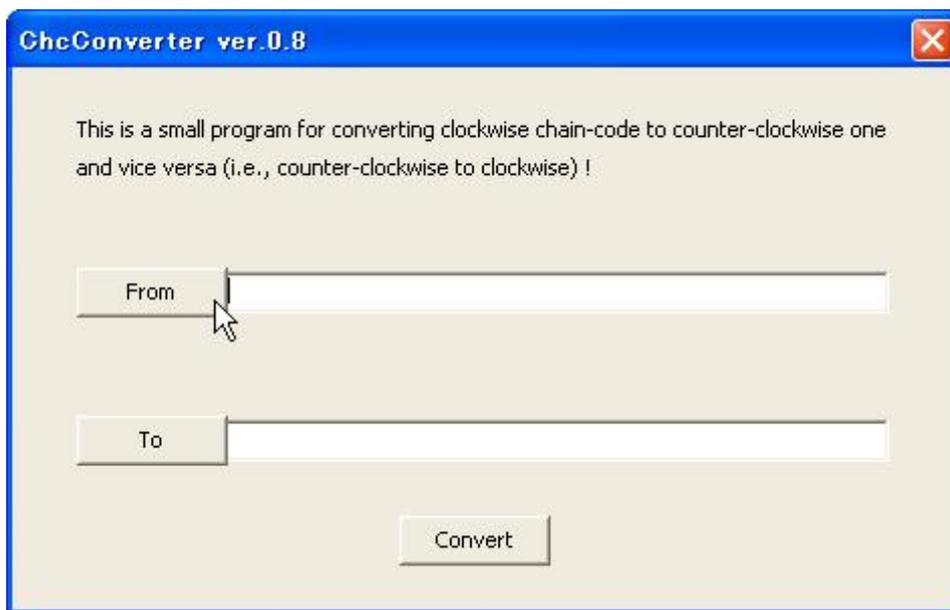


Fig. 1

2. Click “From” button to choose the input file to be converted (Fig. 1).
3. Click “To” button to determine the output file name.
4. Click “Convert” button to convert the input data.

## How to check the direction of contour trace for your data

You can check the direction of contour trace of your data by using two viewer programs, i.e., ChcViewer and NefViewer, that come with SHAPE ver.1.3. **Please check the direction of contour trace after converting your data to confirm that the conversion has been done as you intend it to be!**

## **Contact information**

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