

PlexUtil

OmniPlex[®] and Multichannel Acquisition Processor
(MAP) Neural Data Acquisitions Systems



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(MAP) Neural Data Acquisitions Systems

User Guide

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Publication History

December 2016

This issue of the document corrects a typographical error on page 4—Merging of PL2 files is shown correctly as Enabled.

September 2013

This is the second edition of a separate manual for PlexUtil version 4.

October 2006

This is the first edition of a separate manual for PlexUtil. Previous releases have been part of the Plexon *RASPUTIN Software User's Guide*.

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PlexUtil

1 Overview

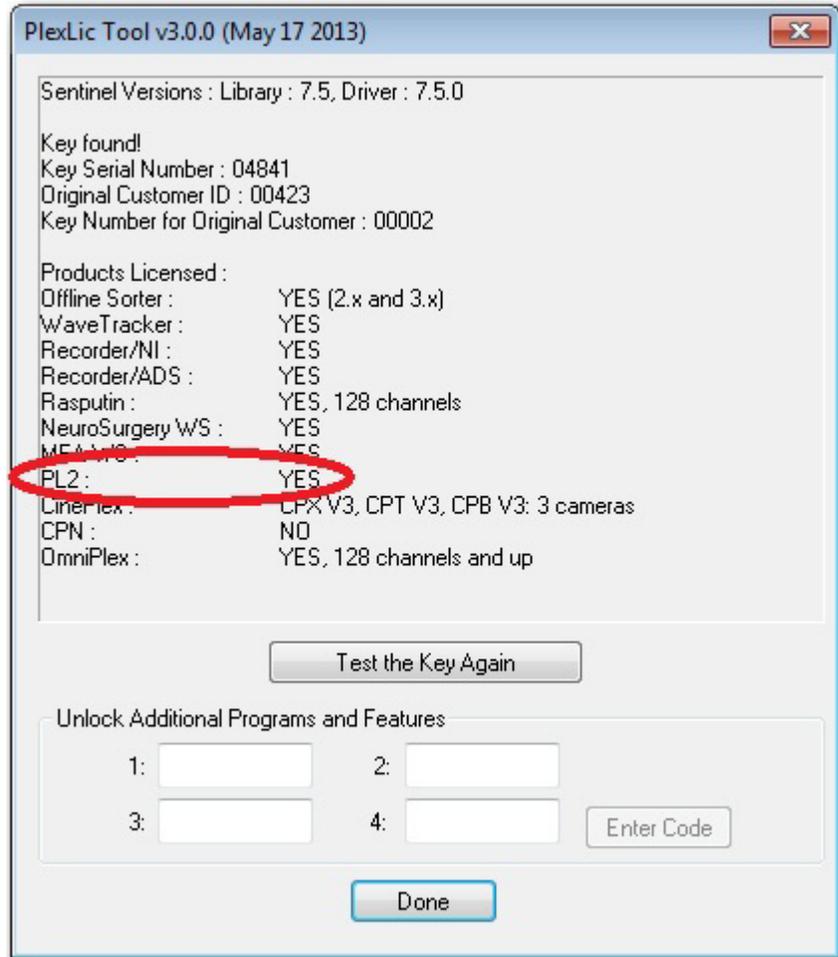
This document adopts the following nomenclature when referring to file types:

- DDT refers to data files with an extension of ddt
- NEX refers to data files with an extension of nex
- PL2 refers to data files with an extension of pl2
- PLX refers to data files with an extension of plx

PlexUtil is a program for converting, splitting, merging, and extracting data from PL2, PLX, and DDT data files. For complete information on these file formats, see [“Understanding PLX, DDT, and PL2 Data Files” on page 24](#). PlexUtil can:

- *scan* PLX files for errors and inconsistencies and allow the user an opportunity to repair damaged files
- *create subsets* of DDT and PLX files which include:
 - all channels
 - the selection of spike, event, and continuous channels
 - the selection of start and end times
 - the choice of file name
- *split* PL2, PLX, and DDT files with the choice of the following options:
 - include all channels
 - include the selection of spike, event, and continuous channels
 - split the file into multiple files by:
 - channels
 - time
 - space
 - frames
 - the choice of file name
- *convert* the continuous channels of a PLX file to a PL2 file(all channels or selected channels of any type), a PLX file to a DDT file(continuous channels only), a DDT file to a PLX file(all channels - continuous), or a PL2 file to a PLX file(all channels or selected channels of any type). The convert function provides the following choice of options:
 - all continuous channels
 - selected continuous channels
 - include all data
 - specify start and end times
 - the choice of file name

Note: In order to convert to and from PL2 files, it is necessary to have the PL2 license key as shown in the screen below (click **Help->About PlexUtil->Licensing**). Note that PL2 is set to YES. If PL2 is set to NO, converting to and from PL2 files is not permitted. Request an upgrade from Plexon Inc if PL2 is set to NO:



Note: PL2 licenses are only on the same key in combination with OmniPlex and/or RASPUTIN licenses. In the future PL2 licenses will also be found in combination with Recorder licenses.

- *re-order* PLX files
- *merge* two or more compatible files as follows:
 - data blocks by timestamps
 - consecutively with a time gap between files
 - the choice of file name

With all functions that accept a time input, the time in fractions of a second may be specified. The time entered in seconds is converted to timestamps. For exam-

ple, if the data in a file is clocked at 40 kHz, the actual time resolution is 25 microseconds.

With all functions that accept a disk space (file size) input, the space in fractions of a megabyte may be specified. The resulting files are never larger than the size specified, which includes all headers and data. PlexUtil attempts to create the largest valid file, which is equal to or less than the size specified.

Any operation may be cancelled at any time. When an operation is cancelled, PlexUtil:

- cancels the activity
- deletes all output files
- deletes all temporary files
- provides a message describing the action

The following table shows the toolbar functionality of the various files for this release of PlexUtil:

Table 1: Toolbar Functionality vs File Type

File Type	Scan	Subset	Split	Convert	Re-order	Merge
DDT	Disabled	Enabled	Enabled	Enabled	Disabled	Disabled
PLX	Enabled	Enabled	Enabled	Enabled	Enabled	Enabled
PL2	Disabled	Disabled	Enabled	Enabled	Disabled	Enabled

2 Opening, Scanning, and Repairing Files

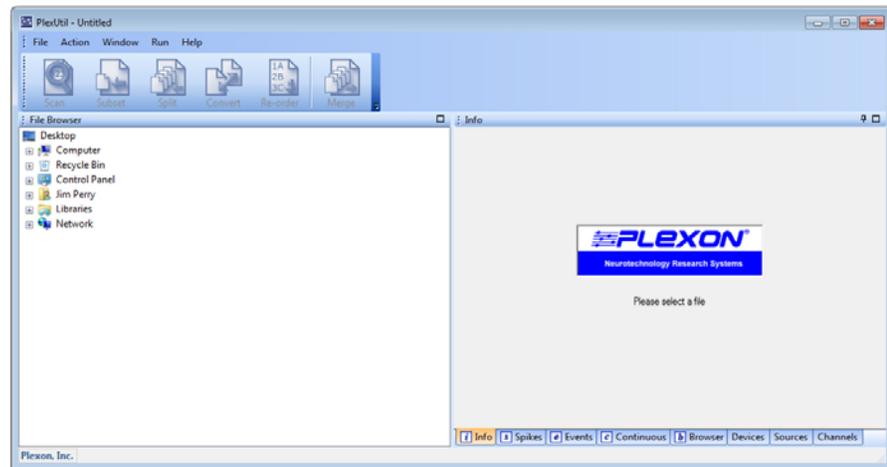
PlexUtil includes a file browser to locate PLX, PL2, and DDT files on the computer or on a network. When PlexUtil starts, it opens with a file browser pane which includes the same view as in Windows Explorer. The PlexUtil toolbar buttons remain unavailable until a file is clicked.

To start PlexUtil and open a file

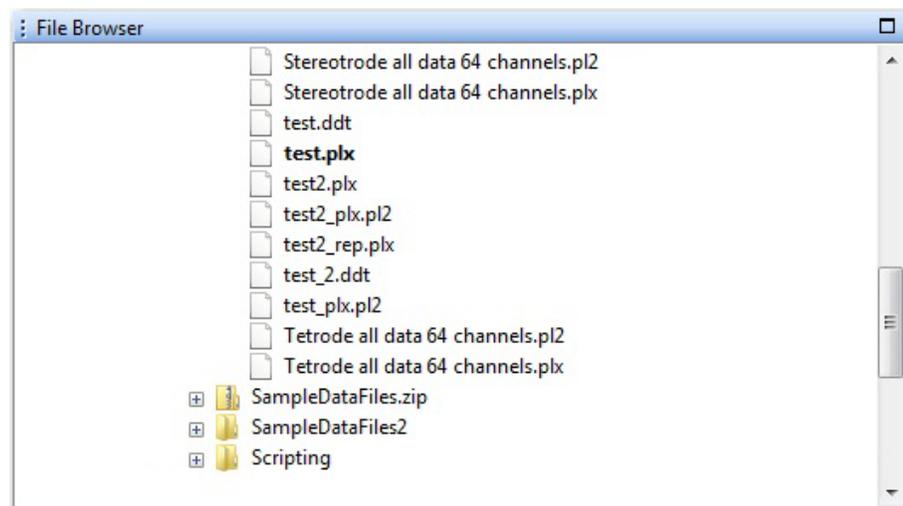
- 1 To start PlexUtil, double-click the **PlexUtil** icon on the desktop.



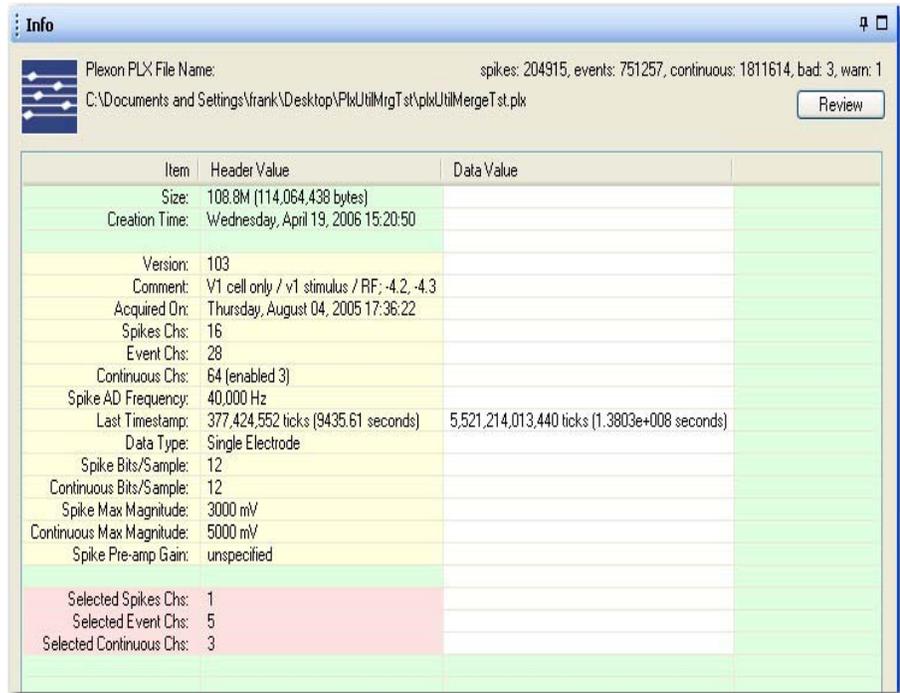
PlexUtil opens with the start screen.



- 2 In the PlexUtil **File Browser** pane, navigate to a PLX file and click on the file to open it.



*PlexUtil scans and opens the PLX file with a summary in the **Info** pane.*

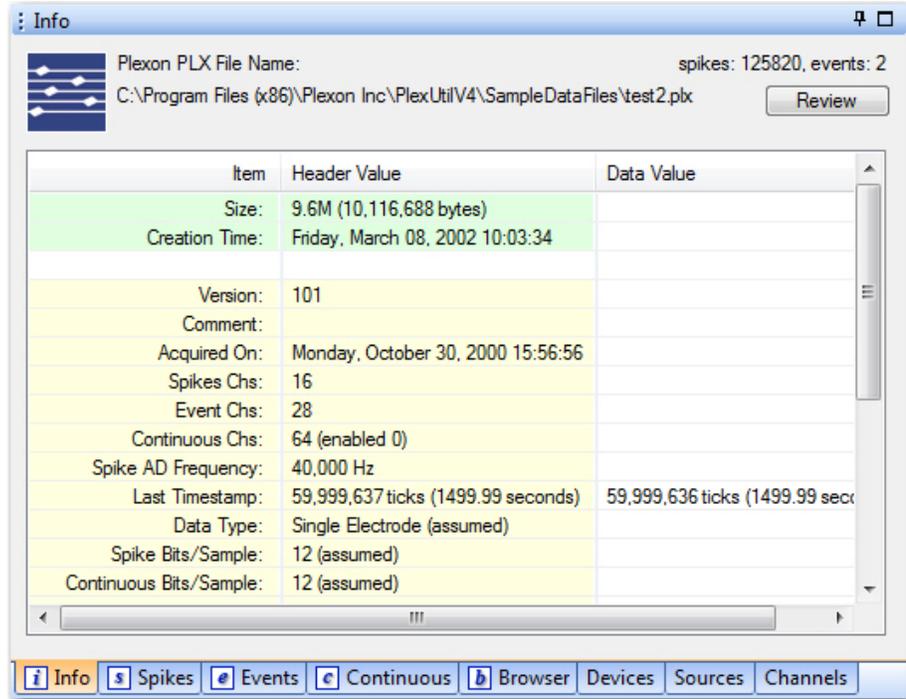


The **Info** pane displays three columns of information derived from three sources, which are highlighted as follows:

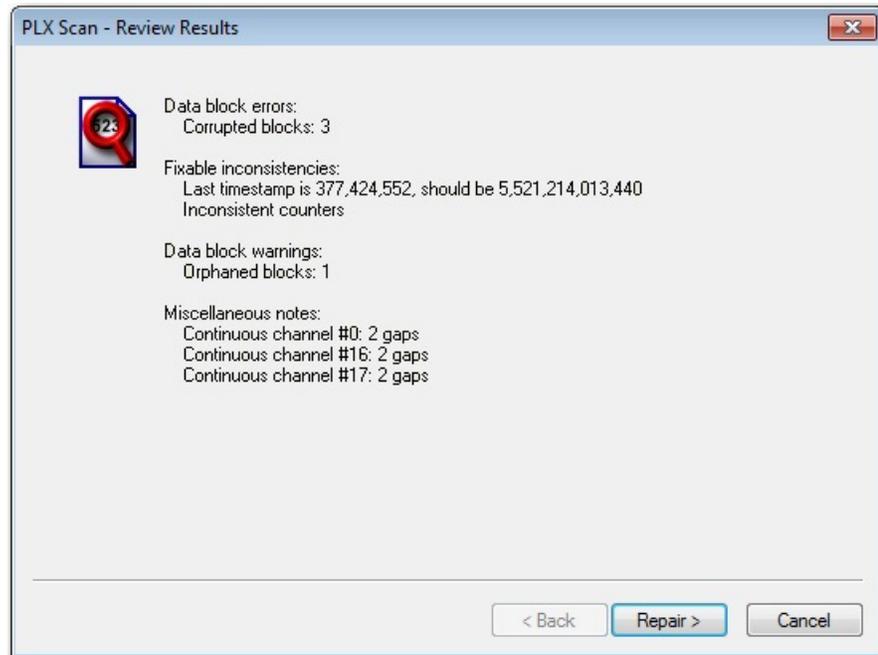
- Green: data from the file system; file size and creation time
- Yellow: data directly from file headers
- Red: information from actual data blocks. PlexUtil automatically selects all channels with non-zero counts before scanning. After PlexUtil scans the file, it updates the counts to reflect actual data.

Note: For complete information on the items that PlexUtil checks while doing a scan, see [“What Scan Does” on page 27](#).

- 3 After the file opens, PlexUtil provides a summary of the items found during the scan in the top right corner of the **Info** pane. If there are errors or problems with the file, a **Review** button will be seen. To see a full report, click **Review**.



The **PLX Scan - Review Results** window opens.



Note: The review window contains a **Repair** button. For more information on repairing files, see [“What Repair Does”](#) on page 29.

To proceed without repairing the file, click **Cancel** to close the review window.

- To look at the contents of the file, click the tabs at the bottom of the right pane. Scan updates the **Counts** and **Data Size** columns for more correct estimation of subsets or splits. The **Browser** tab shows the data blocks in numerical order with the following colors for each data type: Spikes are in white, events

are in yellow, and continuous data are in green. The **Devices** tab provides information about devices, device IDs, and number of channels for each device while the **Sources** tab provides the same information as well as the sources and source IDs. Then **Channels** tab provides information about general channels.

- 5 To close the file, click on any folder in the **File Browser** pane.

3 Creating a Subset of a File

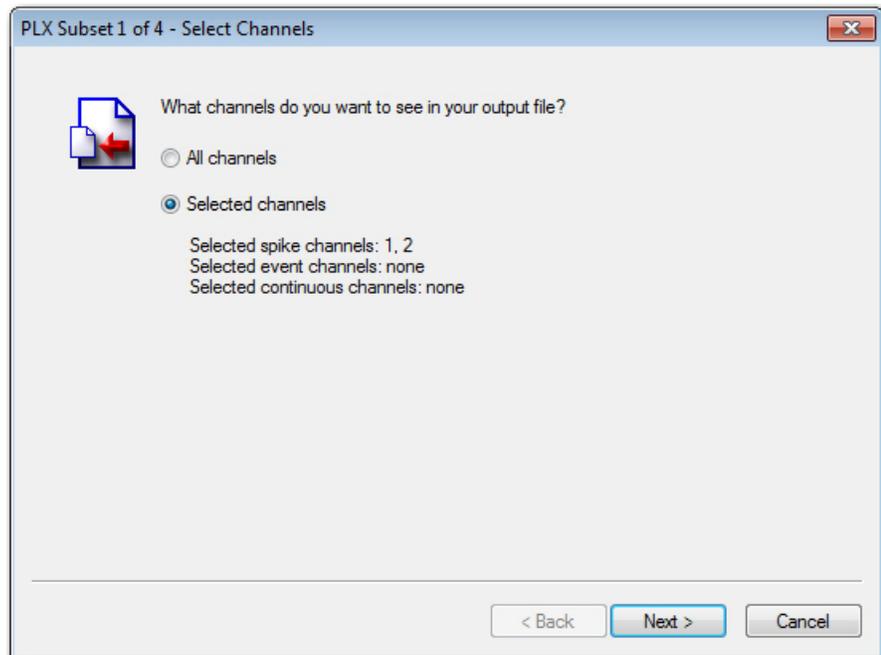
PlexUtil can create a new subset file of a PLX or a DDT file. When the subset file is created, the original PLX/DDT file remains intact. It is possible to select which channels to include in the subset file, which part of the file to include in the subset based on start and end times, and the name and location of the new subset file. Numerous subset files can be created with different content and distinct names.

To create a subset of a file

- 1 Start PlexUtil. In the **File Browser** pane, click the file from which to create a subset.
- 2 When the file opens, review the contents and make any repairs. For more information, see [“What Repair Does” on page 29](#).
- 3 If the subset of the file should only include certain channels, select those channels now; on the **Spikes**, **Events**, and **Continuous** tabs, select each channel to include in the subset of the file.
- 4 On the toolbar, click the **Subset** button.

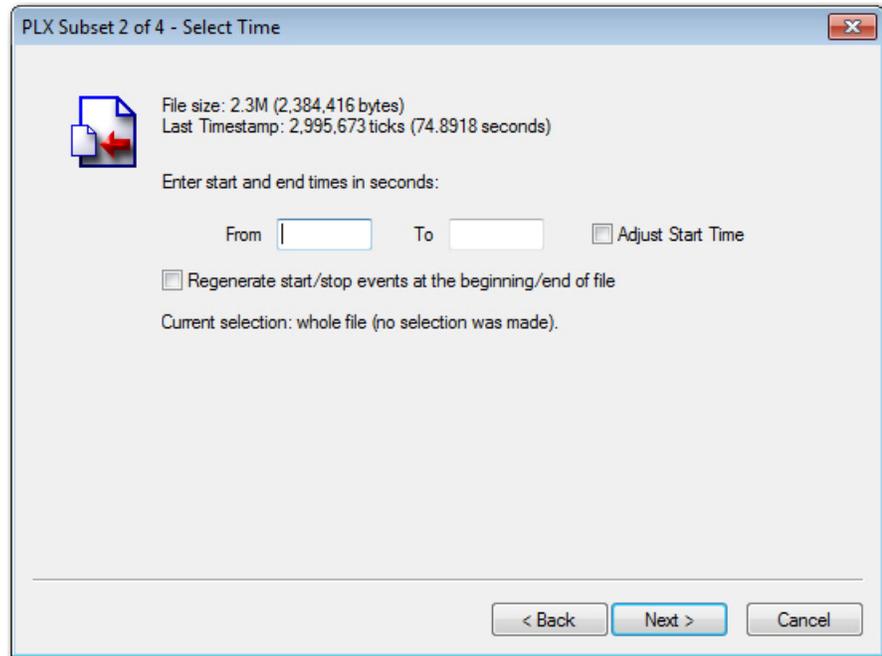


The **PLX Subset 1 of 4 - Select Channels** window opens.



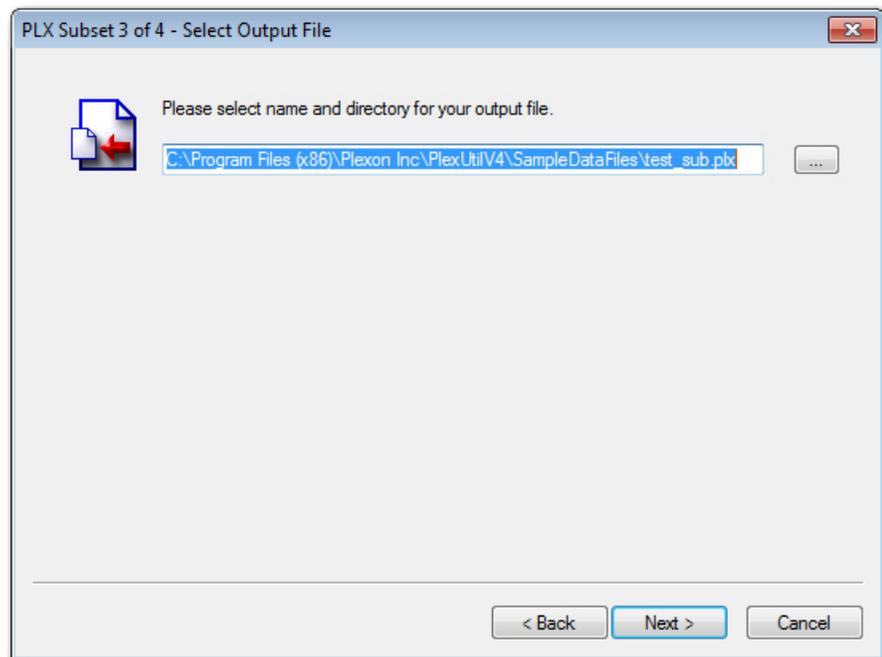
- 5 To include all spike, event, and continuous channels, click **All channels**. To include only those channels selected in [Step 3](#), click **Selected channels**. Click **Next**.

*The **PLX Subset 2 of 4 - Select Time** window opens.*



- 6 If only a portion of the file is to be based on time, enter the start and end times. To update the **Acquired On** time in the header of the subset file and to reset all timestamps accordingly, click **Adjust Start Time**. Click **Next**.

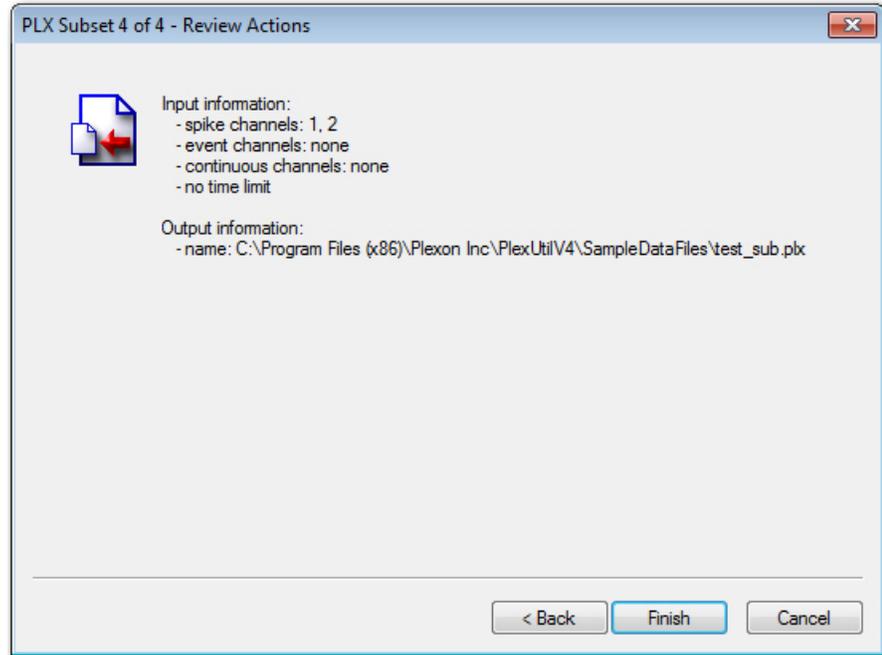
*The **PLX Subset 3 of 4 - Select Output File** window opens.*



Note: PlexUtil automatically adds **_sub** to the subset file name.

- 7 In the **PLX Subset 3 of 4 - Select Output File** window, type or select a location and a name for the subset file. To continue, click **Next**.

The **PLX Subset 4 of 4 - Review Actions** window opens.



- 8 Review the **Input Information** and **Output Information** areas to make sure PlexUtil creates the needed split files, then click **Finish** to create the file and close the subset window.

4 Splitting Files

PlexUtil can split a DDT file, a PLX file, or a PL2 file into multiple new files. When a split operation is completed, PlexUtil preserves the original file and creates multiple new files of the same type that include the characteristics specified. It is possible to specify which channels to include in the split files. PLX files, maybe split it into several PLX files or several NEX files. Files may be split by:

- channels
- time slices in seconds
- file size increments in megabytes
- frame segments that are bounded by start and stop events

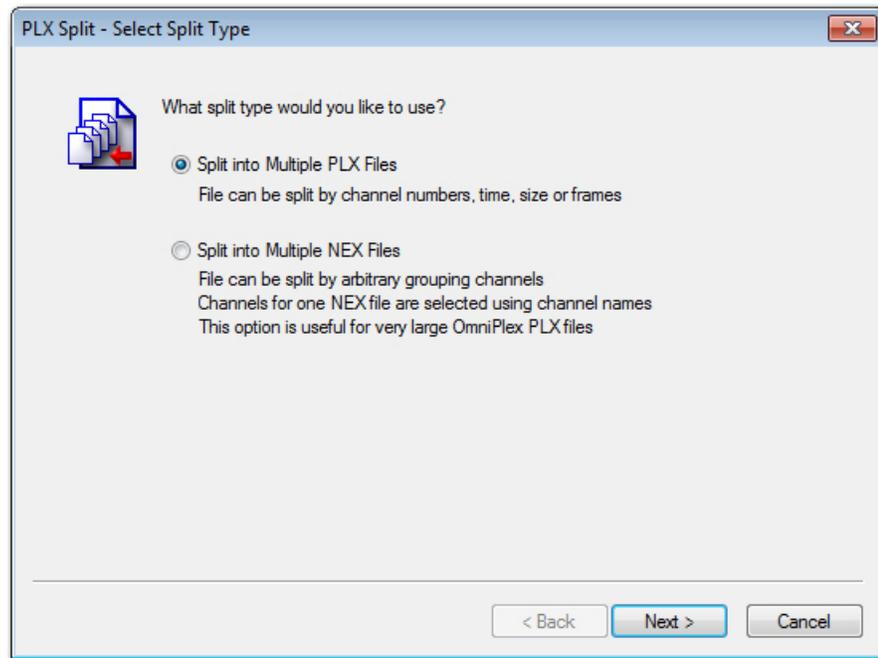
To split PLX files by channels

- 1 In the **File Browser** pane, select the file to split.
- 2 When the file opens, review the contents and make any repairs. For more information, see ["What Scan Does" on page 27](#) and ["What Repair Does" on page 29](#).

- 3 If the split files should only include certain channels, select those channels now; on the **Spikes**, **Events**, and **Continuous** tabs, select each channel to include in the split files.
- 4 On the toolbar, click the **Split** button.



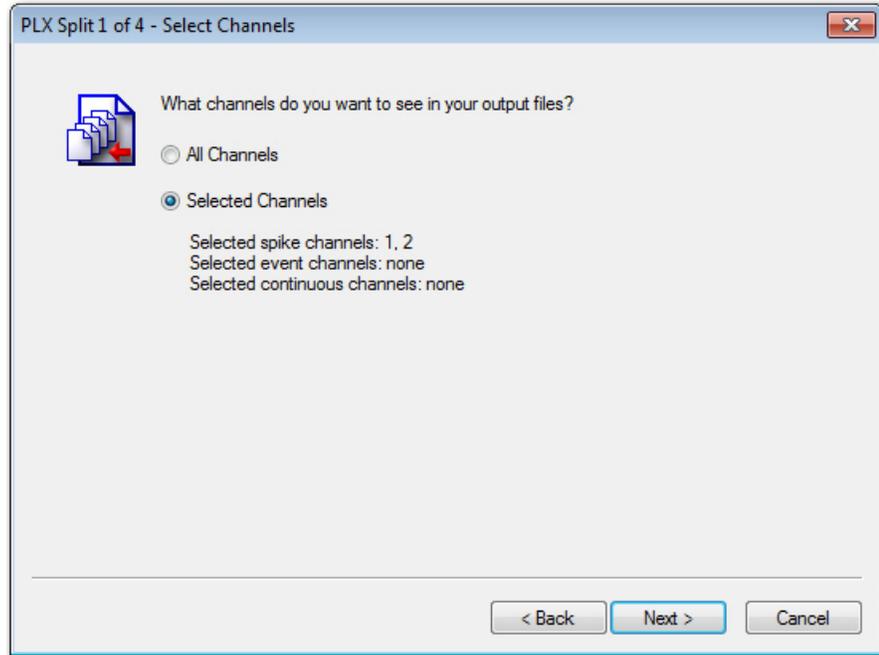
*The **PLX Split - Select Split Type** window opens.*



Note: This screen does not appear when splitting DDT or PL2 files.

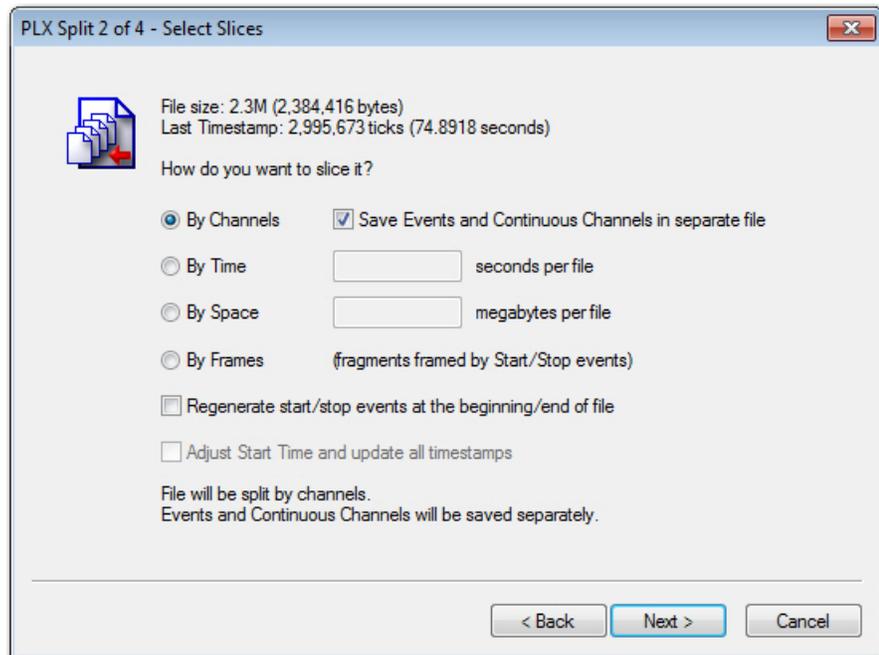
- 5 Select the type of split - in this case it will be **Split into Multiple PLX Files**. Click **Next**.

The **PLX Split 1 of 4 - Select Channels** window opens.



- 6 To include all spike, event, and continuous channels, click **All channels**. To include only those channels selected in [Step 3](#), click **Selected channels**. Click **Next**.

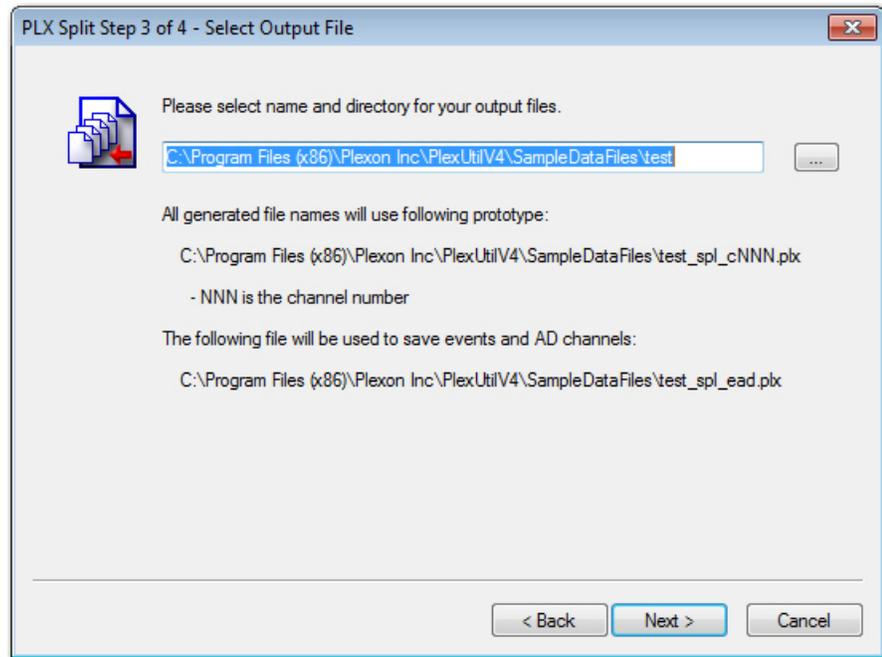
The **PLX Split 2 of 4 - Select Slices** window opens.



-
- 7 In the **PLX Split 2 of 4 - Select Slices** window, chose one of the following options:
- **By Channels:** Click to create a separate file for each spike channel. To create a separate file for all the non-spike channels, click **Save Events and Continuous Channels in separate file**. Otherwise, click to clear the check box to ignore the event and continuous channels. Each split-by-channels file is in the format myfile_spl_cNNN.plx where NNN represents a number.
- Note:** If channels are selected with 0 in the **Units, Unsorted,** or **Count** columns, PlexUtil initially sets up file names for these channels. These file names can appear briefly in the **File Browser** pane. When PlexUtil determines that there is no data for these channels, PlexUtil automatically deletes the file names.
- **By Time:** Click to create separate files based on time slices. Type the duration of each file in seconds. If the box blank is left blank, PlexUtil does not split the file. If a duration is entered that is greater than the initial file duration, PlexUtil does not split the file. Each split-by-time file is in the format myfile_spl_tNNN.plx.
 - **By Space:** Click to create separate files based on file size. Type the size of the files in megabytes. If the box blank is left blank, PlexUtil does not split the file. If a size is entered that is greater than the initial file size, PlexUtil does not split the file. Each split-by-space file is in the format myfile_spl_sNNN.plx.
 - **By Frames:** Click to create separate files based on start and stop events. Each split-by-frames file is in the format myfile_spl_fNNN.plx.

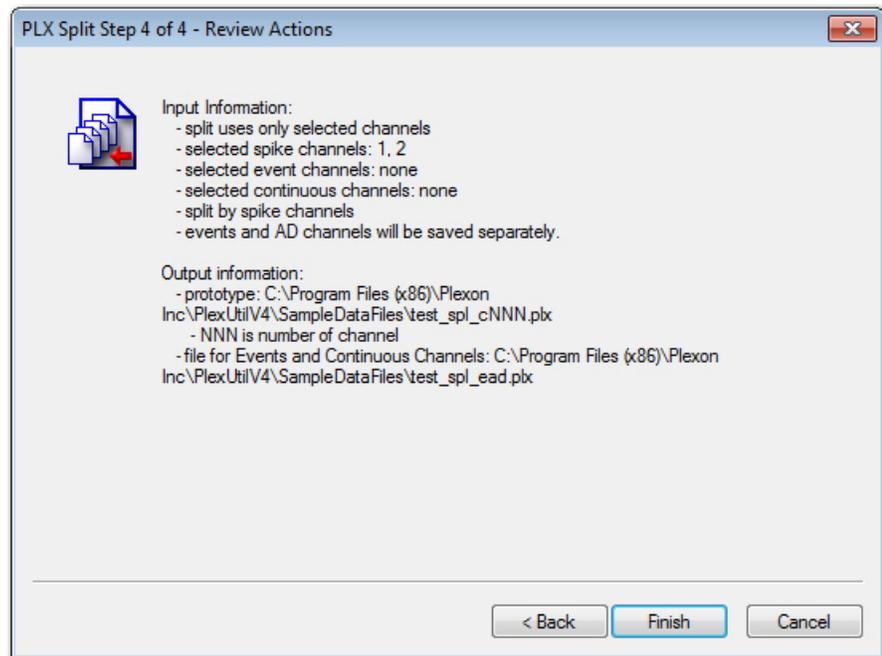
Click **Next**.

The **PLX Split 3 of 4 - Select Output File** window opens.



- 8 In the **PLX Split 3 of 4 - Select Output File** window, type or select a location and name for the split files. Click **Next**.

The **PLX Split 4 of 4 - Review Actions** window opens.



- 9 Review the **Input Information** and **Output Information** areas to make sure PlexUtil creates the split files needed. Click **Finish** to create the file and close the split file window.

5 Converting Files

PlexUtil can convert a DDT file to a PLX file, a PLX file to a PL2 file, or a PL2 file to a PLX file. When a PLX file is selected for conversion, the wizard has two other options (converting to DDT and converting data trodality) which are disabled in the current version of PlexUtil. When a file conversion is completed, PlexUtil preserves the original file and creates a new file that includes the characteristics specified. It is possible to specify which channels to include in the converted files and to specify a time interval to convert.



HINT

Repair data blocks before conversion

If the PlexUtil file scan reveals bad blocks when a file is opened, repair the data blocks before converting the file, otherwise the following error message can appear. For more information, see [“What Repair Does” on page 29](#).

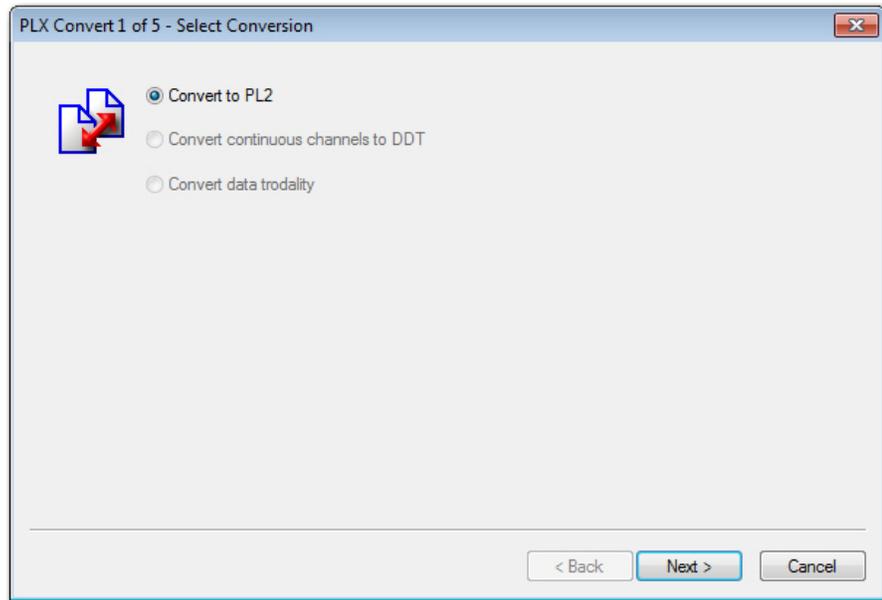


To convert a file

- 1 In the **File Browser** pane, select a DDT, a PLX, or a PL2 file to convert.
Note: This example shows a PLX to PL2 file conversion. A DDT to PLX conversion can also be done, which means the PLX file only contains continuous channels. A PL2 file may also be converted to a PLX file.
- 2 If the **Review** button is visible when the file opens, review the contents and make any repairs. For more information, see [“What Repair Does” on page 29](#).
- 3 Select the desired channels to convert from the **Spikes, Events**, and/or **Continuous** tabs. For conversion of a DDT file only the Continuous channels are selected.
- 4 On the toolbar, click the **Convert** button.

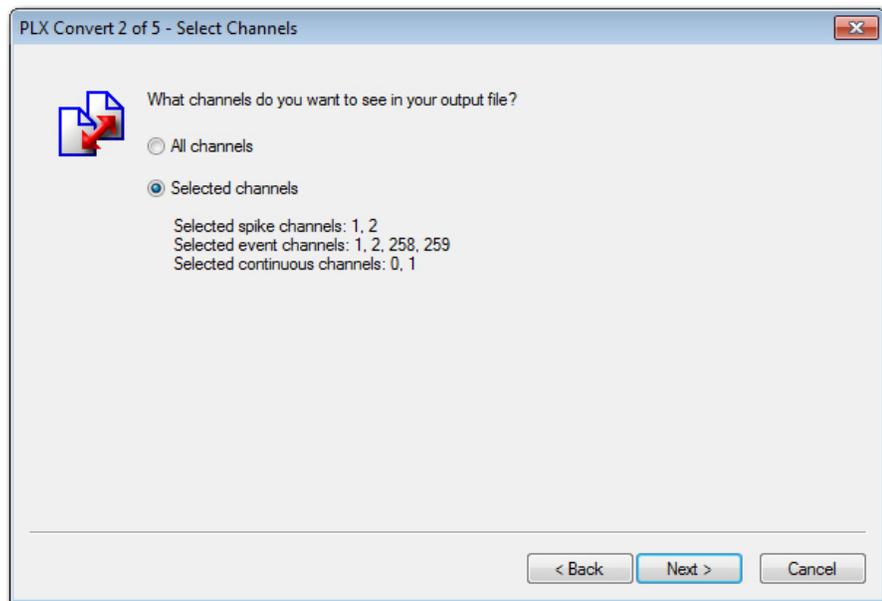


The **PLX Convert 1 of 5 - Select Conversion** window opens.



Make sure that the file to be converted is correct, either PLX to PL2, PL2 to PLX, or DDT to PLX, then click **Next**.

The **PLX Convert 2 of 5 - Select Channels** window opens.



- 5 To convert all channels, click **All channels**. To convert only the channels selected, click **Selected channels**.

Note: If the continuous channel data is inconsistent, the following messages can appear.

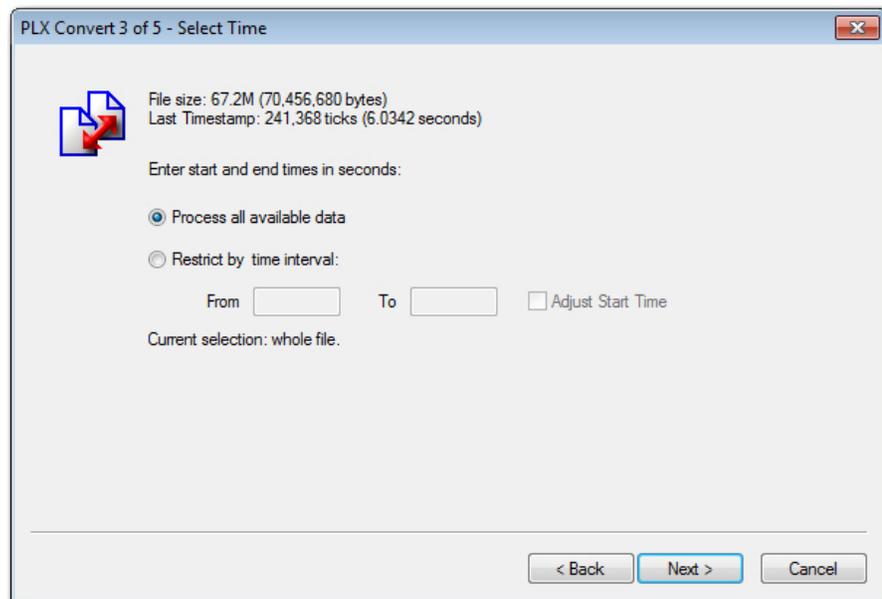


To avoid these problems, in the **Continuous** tab, make sure that the channels selected indicate:

- Enabled = yes
- Frequency = <the same for all selected channels>
- Preamp Gain = <the same for all selected channels>
- Count = <the same for all selected channels>

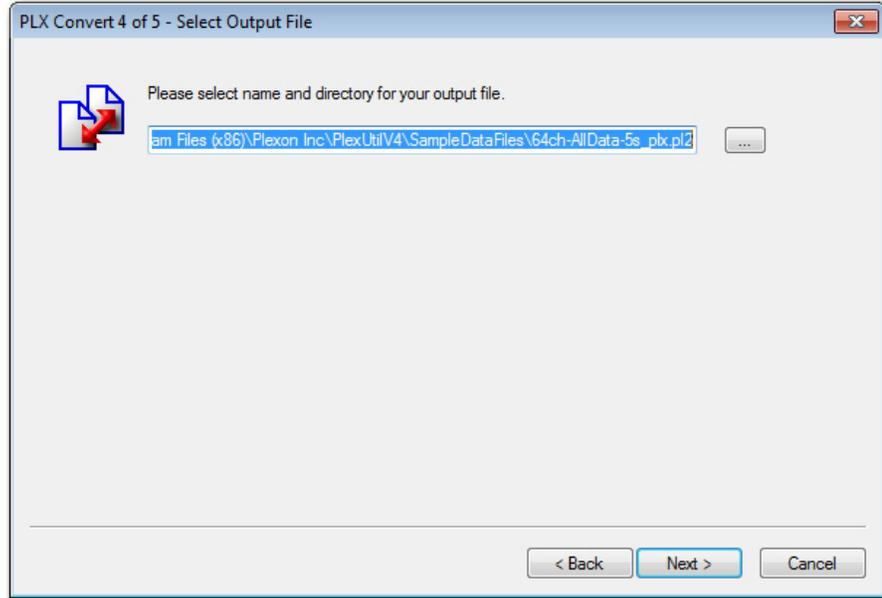
Click **Next**.

*The **PLX Convert 3 of 5 - Select Time** window opens.*



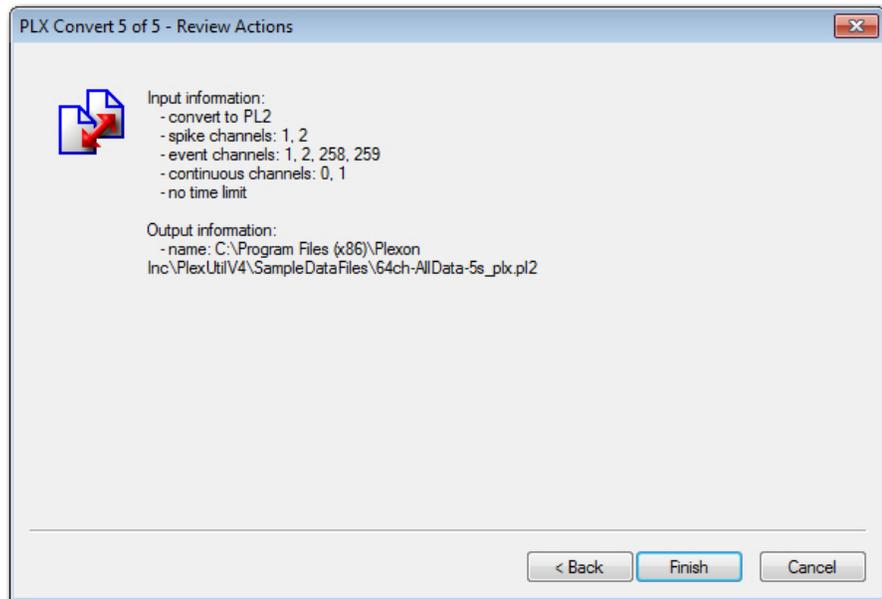
- To include all the data for the channels selected, click **Process all available data**. To include only the data for a specific time interval, click **Restrict by time interval** and type the time in seconds in the **From** and **To** boxes. Click **Next**.

The **PLX Convert 4 of 5 - Select Output File** window opens.



- In the **PLX Convert 4 of 5 - Select Output File** window, type or select a location and name for the subset file. Click **Next**.

The **PLX Convert 5 of 5 - Review Actions** window opens.



- Review the input and output information. If it's correct, click **Finish** to create the file and close the convert window.

6 Re-Ordering Files

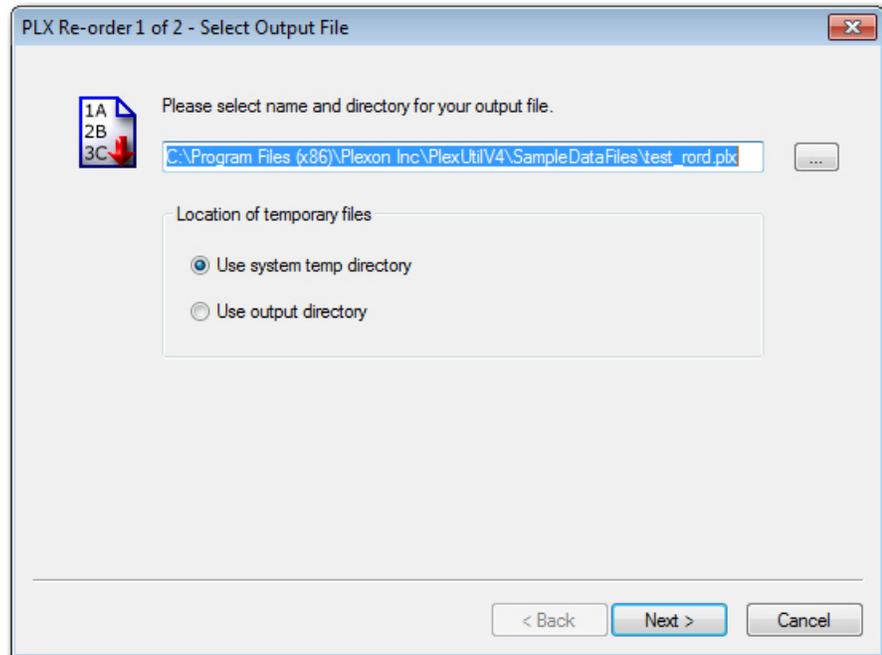
The PlexUtil re-order function can arrange all the data blocks in a PLX file in their timestamp order, from the earliest to the latest. When the file is arranged in timestamp order, PlexUtil can easily determine duplicate data blocks. PL2 files do not need re-ordering because they are ordered by time. PLX files are grouped by blocks (each with a header), and sometimes the blocks are out of order by time and need re-ordering.

To re-order a file

- 1 In the **File Browser** pane, select the file to re-order.
- 2 If the **Review** button is visible when the file opens, review the contents and make any repairs. For more information, see [“What Repair Does” on page 29](#).
- 3 On the toolbar, click the **Re-order** button.

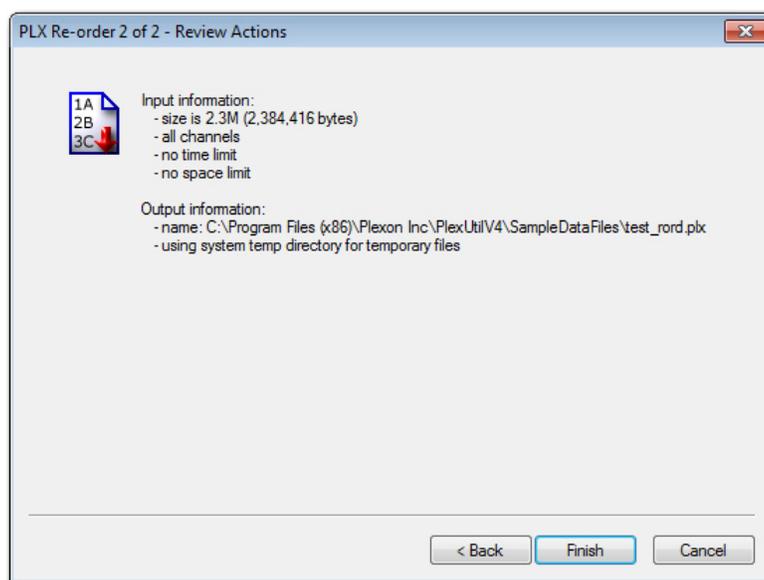


The **PLX Re-order 1 of 2 - Select Output File** window opens.



- 4 Type a path and name for the re-ordered file. PlexUtil can generate large temporary files during the re-order process. If there exists adequate room on the computer hard drive, click **Use system temp directory**. If the output directory is located on another disk drive or a server with adequate capacity, click **Use output directory**. Re-order speed is also a consideration; the local system temp directory is typically much faster than any remote drive. Click **Next**.

The **PLX Re-order 2 of 2 - Review Actions** window opens.



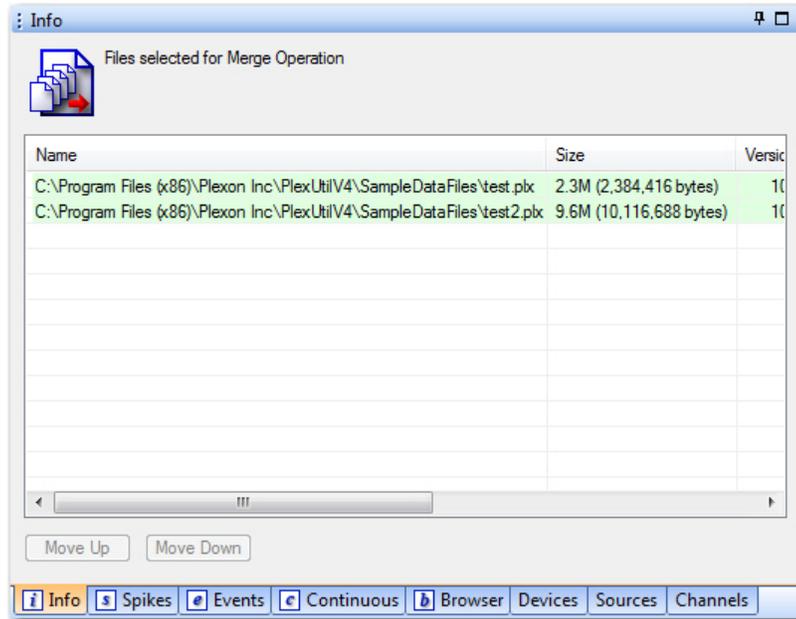
- 5 Make sure the information is correct. Click **Finish** to re-order the file and close the re-order window.

7 Merging Files

The PlexUtil merge function can merge DDT, PLX or PL2 files. To merge two or more files, all of the files must be of the same type. When a PLX file is selected, the **Merge** button is enabled immediately. For PL2 files the **Merge** button is not enabled until the second PL2 file is selected.

To merge files

- 1 In the **File Browser** pane, select two or more files to merge.
- 2 PlexUtil switches to the **Info** tab and displays a list of the files selected.



Color codes identify the suitability of each file for the merge operation according to the following list:

- Green indicates files that can be merged
- Other colors indicate files that cannot be merged with the green files
- Red indicates files that are incompatible or corrupt and they cannot be merged with any file

Note: To merge the files in consecutive order from top to bottom as indicated in [Step 4](#), select a file and use the **Move Up** and **Move Down** buttons to correctly position the file in the list. It is possible to merge only files of the same type; it is not possible to mix DDT and PLX files.

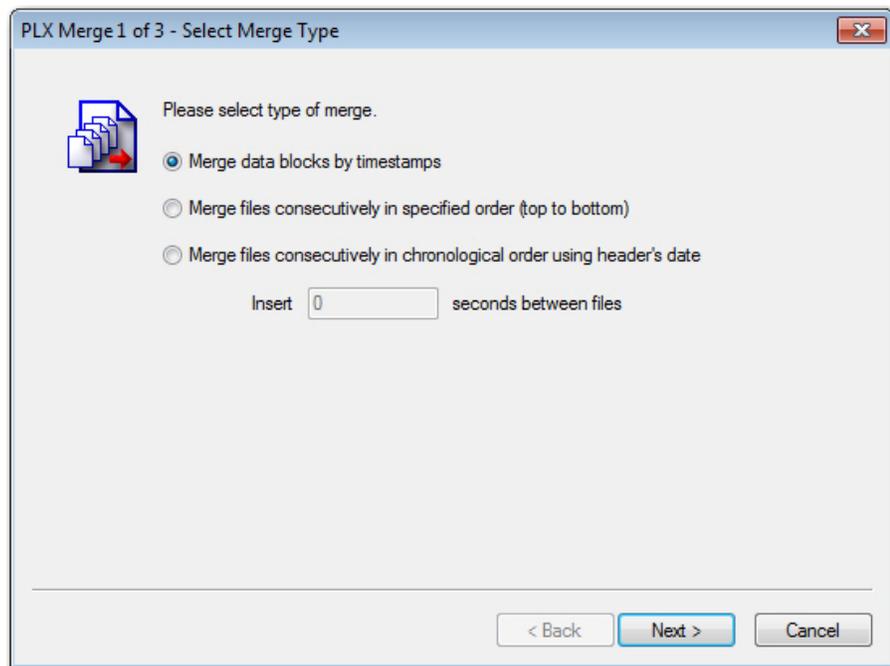
- 3 Click the **Merge** button.



For selected incompatible files, the following message appears. Make sure all the files selected appear green in the file list.



For selected compatible files, the **PLX Merge 1 of 3 - Select Merge Type** window appears.

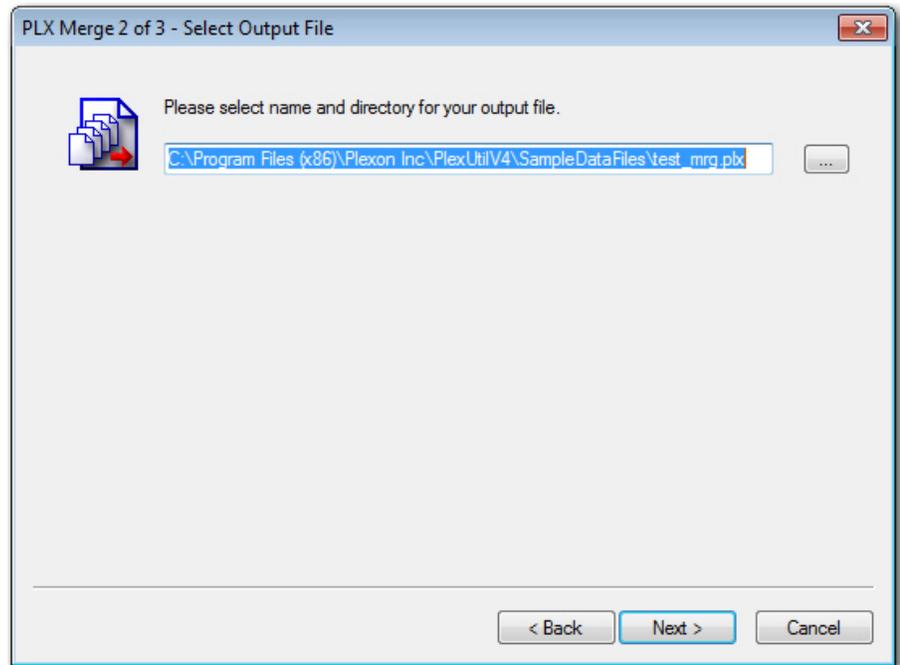


4 Select the merge type:

- **Merge data blocks by timestamps:** Click to merge the data blocks of all the files in the order of their timestamps.
- **Merge files consecutively in specified order (top to bottom):** Click to concatenate files in the order established in [Step 2](#). Enter the separation time for the files in the **Insert _ seconds between files** box.
- **Merge files consecutively in chronological order using header's date:** Click to concatenate the files in chronological order. Enter the separation time for the files in the **Insert _ seconds between files** box.

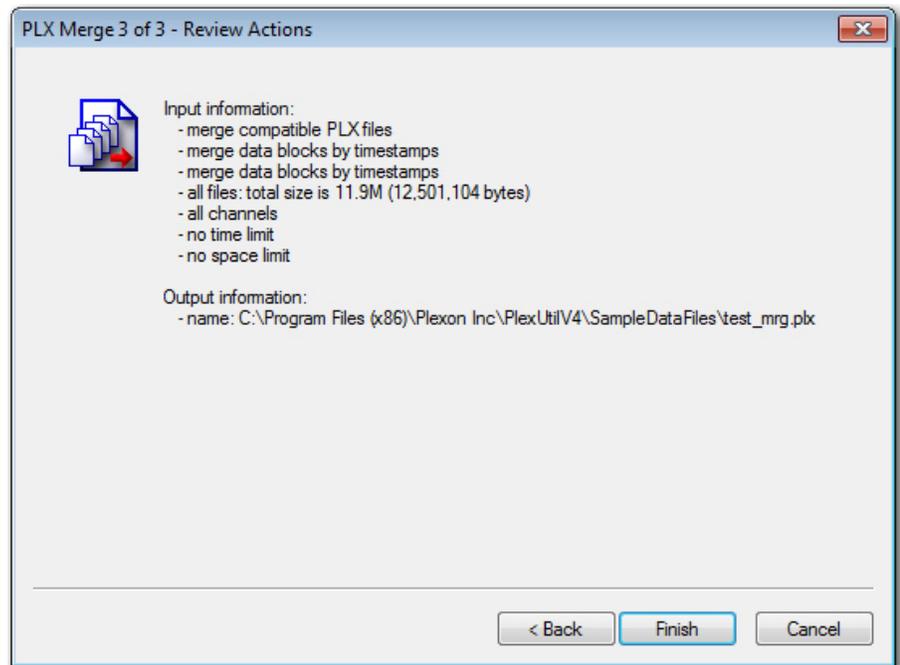
Click **Next**.

The **PLX Merge 2 of 3 - Select Output File** window opens.



- 5 Type the directory and file name. PlexUtil automatically adds **_mrg** to the file name. Click **Next**.

The **PLX Merger 3 of 3 - Review Actions** window opens.



- 6 Make sure the information is correct and that there exists sufficient disk space to accommodate the new merge file. Click **Finish** to start the merge.

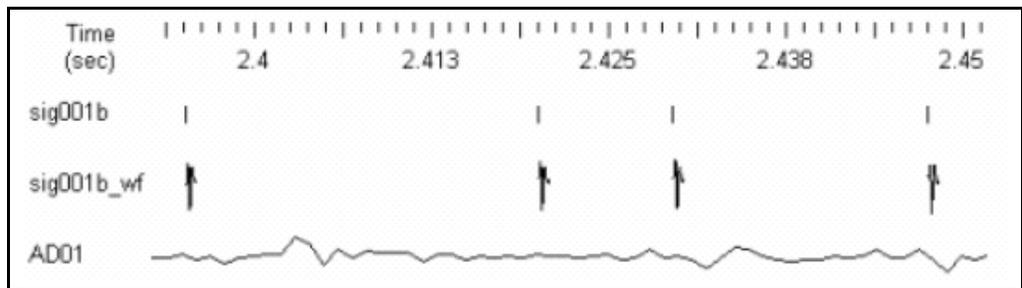
8 Understanding PLX, DDT, and PL2 Data Files

This overview section describes each data file type in detail. It also lists the purpose of each PlexUtil function.

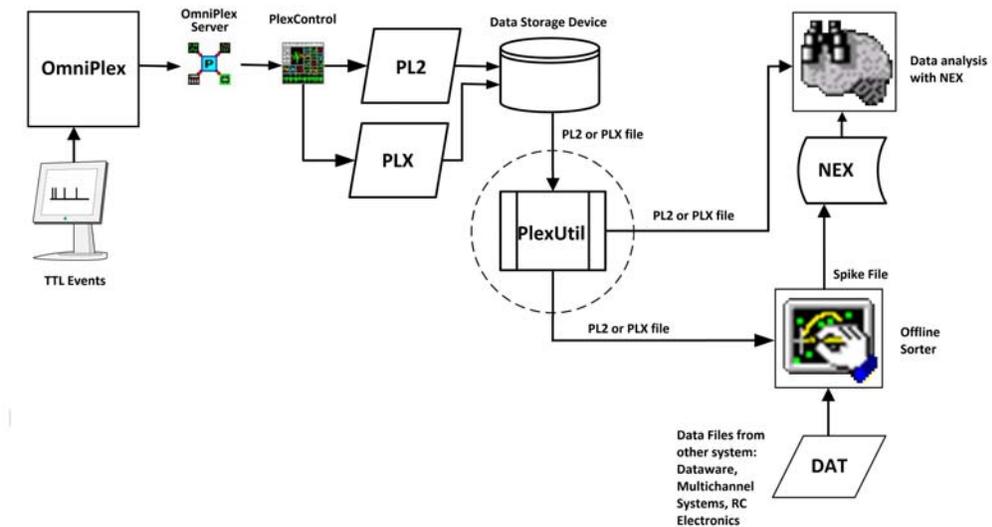
8.1 PLX Data Files

PLX files are Plexon data files containing action-potential (spike) timestamps and waveforms, event timestamps, and continuous variable data. PLX files are optimized for recording segments of waveforms where thresholds have been applied. However, low-digitizing-rate continuous channels can be saved in a PLX file. Some PlexUtil can be used to merge PLX files and extract portions of PLX data files to DDT files.

The following illustration shows a portion of a PLX file containing the spike train sig001b and its accompanying waveform segments sig001b_wf together with the continuous variable AD01, as visualized in NeuroExplorer.



A number of different Plexon software programs can generate output in the form of a PLX file including Sort Client, [Plexon Offline Sorter](#), and [Plexon Recorder](#). Offline Sorter can sort spike waveforms in PLX files and they can be analyzed together with the continuous variables by using [NeuroExplorer](#). Offline Sorter can also save PL2 files if a PL2 file was opened.



8.2 DDT Data Files

The DDT data file type is optimized for continuous (streaming) recording where every channel is continuously recorded without gaps and the recording includes any “dead time” between spikes. If many channels are recorded, DDT files can be very large. The DDT file type is appropriate for:

- Continuous signals such as local field potentials (LFP).
- Spikes when the data thresholds are changed off line.
- Custom processing methods that require continuous data.

8.3 PL2 Data Files

The PL2 data file type is Plexon’s improvement over the earlier PLX file type. PL2 files are created by Plexon’s OmniPlex system and offers somewhat smaller file size than the PLX file type and significantly faster read times. The format is more general than the PLX file type and includes all existing PLX data, more channels and different kinds of data, and system configuration and individual channel metadata, including topology, data sources, probe information, electrode trodality, and etc. The PL2 file type is supported by industry standard analysis and processing tools:

- Offline Sorter,
- NeuroExplorer,
- PlexUtil file utility program,
- MatLab PL2 Software Development Kit, and
- C++ PL2 Software Development Kit for interfacing to other analysis programs and languages.

PL2 files offer a 50% increase in block by block file reads when performed by NeuroExplorer and the block read APIs in the C++ SDK. PL2 files also offer tremendous speed improvement for single channel reads by Offline Sorter and Matlab programs. The image below compares the PL2 and PLX files.

256 Channels (SPK + FP): 2 Hours Recording Time

	PLX Format 12.3 GB	PL2 Format 11.4 GB
Read SPK channel (421,000 spikes)	301.7 sec	1.7 sec
Read FP channel	301.5 sec	0.8 sec

SPK – 32 point spike waveforms
FP – 1 kHz continuously digitized field potentials

256 Channels (SPK + WB + FP): 10 Minutes Recording Time

	PLX Format 13.8 GB	PL2 Format 11.4 GB
Read SPK channel (35,000 spikes)	275 sec	0.18 sec
Read WB channel	275.7 sec	2.50 sec
Read FP channel	275.5 sec	0.08 sec

WB – 40 kHz continuously digitized wideband signal
SPK – 32 point spike waveforms
FP – 1 kHz continuously digitized field potentials

9 What Scan Does

When a PLX file is opened or scanned, PlexUtil performs the following checks:

- Checks that the last timestamp corresponds to the actual data.
- Checks that PLX counters match the actual statistics.
- If the size of any data block is bigger than the size of the available data, PlexUtil marks the data block as corrupted.
- If any data block is of unknown data type, PlexUtil marks it as corrupted.
- PlexUtil processes each type of recognized data block as follows:
 - Spikes
 - If the number of waveforms is negative or more than 1, PlexUtil marks it as corrupted.
 - If a unit is negative or a block contains more than 26 units, PlexUtil marks it as corrupted.
 - If the number of words in a waveform is negative or more than 480, PlexUtil marks it as corrupted.
 - If a channel does not correspond to any spike channel declaration in the header, PlexUtil marks it as orphaned.
 - If a good block has a timestamp that is less than a timestamp of a previous block from the same channel, PlexUtil marks it as out-of-order.
 - If a good block has a timestamp that is equal to a timestamp of a previous block from the same channel, PlexUtil marks it as a duplicate.
 - Events
 - If a channel is greater or equal to 261, PlexUtil marks it as corrupted.
 - If the number of words in a waveform is negative or more than 480, PlexUtil marks it as corrupted.
 - If a channel doesn't correspond to any event channel declaration in the header, PlexUtil marks it as orphaned.
 - If a good block has a timestamp that is less than a timestamp of a previous block from the same channel, PlexUtil marks it as out-of-order.
 - If a good block has a timestamp that is equal to a timestamp of a previous block from the same channel, PlexUtil marks it as a duplicate.

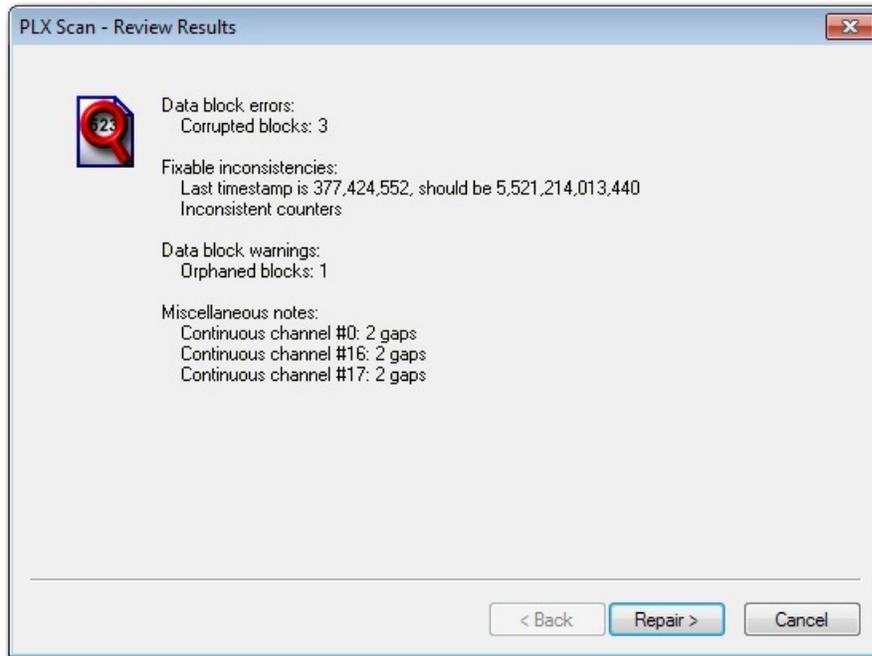
- Continuous
 - If the number of waveforms is negative or more than 1, PlexUtil marks it as corrupted.
 - If the number of words in a waveform is negative or more than 1024, PlexUtil marks it as corrupted.
 - If a channel doesn't correspond to any continuous channel declaration in the header, PlexUtil marks it as orphaned.
 - If a good block has a timestamp that is less than a timestamp of a previous block from the same channel, PlexUtil marks it as out-of-order.
 - If a good block has a timestamp that is equal to a timestamp of a previous block from the same channel, PlexUtil marks it as a duplicate.
 - If a good block overlaps the data from a previous block for any period of time, PlexUtil marks it as overlapped.
 - If there is a time gap between a good data block and a previous block, PlexUtil marks it as a gap.

After scanning, PlexUtil reports problems under the following headings in the **PLX Scan - Review Results** window:

- **Data block errors:** The total number of corrupted blocks.
- **Fixable inconsistencies:** Inconsistent last timestamps and inconsistent counters. For example, a last timestamp with a lower value than a preceding timestamp.
- **Data block warnings:** The total number of orphaned blocks.
- **Miscellaneous notes:**
 - For spike channels:
 - The total number of out-of-order blocks for each channel.
 - The total number of duplicate blocks for each channel.
 - For event channels:
 - Total number of out-of-order blocks for each channel.
 - Total number of duplicate blocks for each channel.
 - For continuous channels:
 - The total number of out-of-order blocks for each channel.
 - The total number of duplicate blocks for each channel.
 - The total number of gaps in continuous data for each channel.
 - The total number of overlaps for each channel.

10 What Repair Does

If PlexUtil finds any problems after scanning a file, the **Review** button appears in the top right corner. When **Review** is clicked, the **PLX Scan - Review Results** window opens with a list of all the problems PlexUtil found.



PlexUtil can repair some of these problems. If PlexUtil finds errors, warnings, or fixable inconsistencies, the **Repair** button appears in the **PLX Scan - Review Results** window. PlexUtil can repair all fixable inconsistencies. When **Repair** is clicked, PlexUtil creates a new copy of the file that includes the following repairs:

- All counters and the last timestamp are replaced with the actual values.
- All corrupted blocks are skipped and not copied to the new file.
- Repair also corrects headers and recalculates statistics.
- The file-name format for the repaired is myfile_rep.plx.

The PlexUtil Scan and Repair functions do not repair out-of-order blocks. The Re-order function must be used to repair out-of-order blocks. For more information, see [“Re-Ordering Files” on page 19](#).

11 PlexUtil Output File-Name Suffixes

Each PlexUtil function creates files with unique file-name suffixes. Here is a list of file-name suffixes and the PlexUtil function that produces that format:

- `_rep.plx` = a **Repaired** (rep) file
- `_sub.plx` = a **Subset** (sub) of file
- `_spl_cNNN.plx` = a file **Split** (spl) by **channels** (c) with the numeric (N) sequence of each split file starting at 001
- `_spl_tNNN.plx` = a file **Split** (spl) by **time** (t) with the numeric (N) sequence of each split file starting at 001
- `_spl_sNNN.plx` = a file **Split** (spl) by file-size **space** (s) with the numeric (N) sequence of each split file starting at 001
- `_spl_fNNN.plx` = a file **Split** (spl) by **frames** (f) with the numeric (N) sequence of each split file starting at 001
- `_spl_cNNN.pl2` = a file **Split** (spl) by **channels** (c) with the numeric (N) sequence of each split file starting at 001
- `_spl_tNNN.pl2` = a file **Split** (spl) by **time** (t) with the numeric (N) sequence of each split file starting at 001
- `_spl_sNNN.pl2` = a file **Split** (spl) by file-size **space** (s) with the numeric (N) sequence of each split file starting at 001
- `_spl_fNNN.pl2` = a file **Split** (spl) by **frames** (f) with the numeric (N) sequence of each split file starting at 001
- `_ddt_tNNN.plx` = a DDT file **Converted** to PLX format with a sequential number (N) of time (t) chunks starting at 001
- `_plx.pl2` = a PLX file **Converted** to PL2 format
- `_pl2.plx` = a PL2 file **Converted** to PLX format
- `_rord.plx` = a re-ordered (rord) file produced by the **Re-order** function
- `_mrg.plx` = a file merged (mrg) file produced by the **Merge** function

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PlexUtil

OmniPlex and Multichannel Acquisition
Processor (MAP) Neural Data Acquisitions
Systems

User Guide

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