

Event TPR File

Overview

The Event_TPR_File command is used to match a pre-saved signal pattern to a signal in the current selected trial. When the shape of the signal matches the pattern, an event is created at that frame.

- It is typically used to validate and test pattern recognition templates when build TPR files for broader use across multiple trials.
- The signal that the pattern is being matched to must exist in the trial.

Pipeline Command

The command below is as seen on the Visual3D application, it has many parameters as there are many options to manipulate this command:

```
Event_TPR_File
! /SIGNAL_TYPES=
! /SIGNAL_FOLDER=ORIGINAL
! /SIGNAL_NAMES=
/EVENT_NAME=
! /SELECT_X=FALSE
! /SELECT_Y=FALSE
! /SELECT_Z=FALSE
/FILE_NAME=
! /TOLERANCE=20.0
;
```

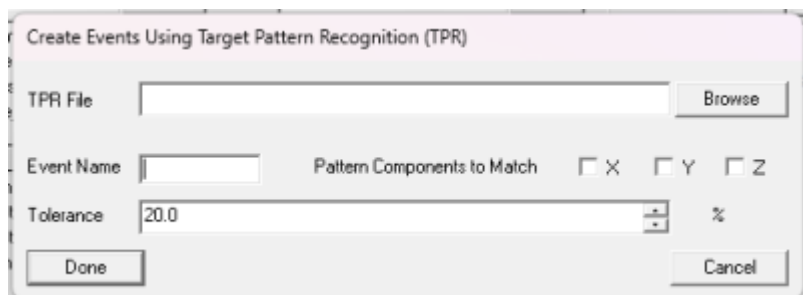
Command Parameters

The following table shows the command parameters and descriptions:

Parameter	Description
/SIGNAL_TYPES=	Type of signal being evaluated (e.g., `LINK_MODEL_BASED`, `ANALOG`).
!/SIGNAL_FOLDER=	Folder where the signal is located (`ORIGINAL`, `FILTERED`, etc.).
/SIGNAL_NAMES=	Name of the signal to be evaluated (e.g., `Right_Ankle_Accel`).
/EVENT_NAME=	Name of the new event that will be created when a match is found.
!/SELECT_X=FALSE	Use the X-component of the signal (set to `TRUE` if relevant).
!/SELECT_Y=FALSE	Use the Y-component (e.g., for vertical acceleration).
!/SELECT_Z=FALSE	Use the Z-component (e.g., for forward/backward motion).
/FILE_NAME=	Full name of the `.tpr` file containing the pattern template.
!/TOLERANCE=20.0	The matching threshold. Lower values = stricter match (e.g., 10.0 = tight match).

Dialog

The dialog for this command simplifies pattern-based event creation:



Interface elements:

- **TPR File:** A browse option to load in the pattern file.
- **Event Name:** Define the event label to be generated.
- **Pattern Components to Match:** Select X, Y, and/or Z direction.
- **Tolerance:** Controls how strictly the signal must match the pattern. Smaller values mean tighter matching.

Examples

The following example will go through the use of the Event_TPR_File command within the Visual3D application.

Example: Assigning Events to Event-less Trial based on TPR

This command is not as intuitive for use as the Event_TPR_Signal when it comes to performing TPR on and placing events on specified signals.

- It is more useful for assigning events to the whole file if you have already generated a .tps file (target pattern signal) or you could also simply use events from another .c3d, like Event_TPR_Signal.
- An important thing to note is that this command is dependent on what is saved in the TPR file - which must be done properly using **Event_TPR_Signal** or **Event_Save_TPR_Signal**

The following steps can be taken for this example:

1. Make sure that you have a valid TPR file with the events and make sure that the same signal also exists in the current .c3d which has no events.
2. In this example, a .c3d file will be used which has ALL automatically detected gait events.
3. The following information can be entered, this is transferring the LHS events from the user selected file to the signal which was selected to be L Hip Angle.

Create Events Using Target Pattern Recognition (TPR)	
TPR File	[USER] Browse
Event Name	LHS Pattern Components to Match ☒ X ☐ Y ☐ Z
Tolerance	20.0 %
Done	Cancel

```
Event_TPR_File
/SIGNAL_TYPES=LINK_MODEL_BASED
! /SIGNAL_FOLDER=ORIGINAL
/SIGNAL_NAMES=L Hip Angle
/EVENT_NAME=LHS
/SELECT_X=TRUE
! /SELECT_Y=FALSE
! /SELECT_Z=FALSE
/FILE_NAME=[USER SELECTION]
! /TOLERANCE=20.0
;
```

After running this pipeline command, the **LHS** Event should show up in the workspace.

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