

C3D_File

Motion Analysis Corporation exports a vanilla C3D file for which we have had very few problems reading. They also support [real-time streaming](#) of data.

Exported C3D file with incorrect POINT rate and/or incorrect ANALOG rate

On rare occasions EVART will export C3D files with an incorrect POINT rate (e.g. 60 Hz instead of 240 Hz) or an incorrect ANALOG rate (e.g. a rate that is not an integer multiple of the POINT rate; as expected by the C3D format).

Download the [example file](#).

Open the c3d file that was just downloaded.



Note that the force vectors are active before the person has event jumped.



Add **Modify_Point_Rate** to the pipeline.



Add **Import_Analog_Signals_From_An File** to the pipeline. Execute the pipeline.



The c3d file on disk should now be corrected.



The following pipeline can be used for this process.

Clear the Workspace

File_New ; Prompt the user for the Folder containing the data files.

Set_Pipeline_Parameter_To_Folder_Path /PARAMETER_NAME=FOLDER ; Set a pipeline parameter that includes a wildcard identifying all c3d files in the Folder.

Set_Pipeline_Parameter /PARAMETER_NAME=MOVEMENT /PARAMETER_VALUE=::FOLDER&*.c3d ;
Open the C3D files

Open_File /FILE_NAME=::MOVEMENT ; Set the active file to be ALL_FILES

Select_Active_File /FILE_NAME=ALL_FILES ; Change the POINT:RATE in the parameter section of the C3D file.

Modify_Point_Rate /POINT_RATE=200 /OVERWRITE_C3D_FILE=FALSE ; Import the ANALOG signals

from the associated anb file. Update the C3D file on disk.

```
Import_Analog_Signals_From_An File /REPLACE_EXISTING_SIGNALS=TRUE  
/UPDATE_C3D_FILE=FALSE ;'
```

Truncation of Parameter Names

Why does a c3d file exported from Motion Analysis Corporation truncate all of my MARKER NAMES to four characters, which often produces more than one marker with the same name. Can I use Visual3D to fix this?

Motion Analysis Corp outputs a c3d file consistent with a very early version of the c3d format. This is not a bad thing because it means that the files are consistent with older analysis programs (e.g. NIH MOVE3D) except that one of the restrictions was that a marker label could only have four characters. When you export from EvaRT to c3d, the label names are truncated to four characters, which often yields many markers that have the same name. Fortunately, MAC contains the original marker names in a different parameter. In Visual3D you can load all of your MAC files after data collection and run the following pipeline command; this command simply replaces all marker names with the marker description, which is probably what you expected EvaRT to export.

```
Copy_Point_Descriptions_To_Point_Labels ! /OVERWRITE_C3D_FILE=FALSE ;
```

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