

|                                                                                |                                    |                              |
|--------------------------------------------------------------------------------|------------------------------------|------------------------------|
|  |                                    |                              |
| 2026/09/15 06:53                                                               | 1/1                                | First Derivative of a Signal |
| <b>First_Derivative</b>                                                        |                                    |                              |
| /Signal_Types=                                                                 | The type of signal to be processed |                              |
| /Signal_Folder=                                                                | The name of the signal folder      |                              |

Compute the first derivative at each point of a signal. The first and last data points become DATA\_NOT\_FOUND (identified in the C3D file as a POINT Reliability value of &endash;1).

Derivatives are calculated using Finite Difference Algorithms.

Given the signal:

$x(t_i)$  for  $i=1, 2, \dots, n$  The first derivative is calculated using:  $x\dot{(t_i)} = (x(t_{i+1}) - x(t_{i-1})) / (t_{i+1} - t_{i-1})$

From:  
<https://has-motion.com/wiki/> - Wiki Documentation Site

Permanent link:  
[https://has-motion.com/wiki/doku.php?id=visual3d:documentation:pipeline:signal\\_commands:first\\_derivative\\_of\\_a\\_signal&rev=1720027805](https://has-motion.com/wiki/doku.php?id=visual3d:documentation:pipeline:signal_commands:first_derivative_of_a_signal&rev=1720027805)

Last update: 2024/07/03 17:30

