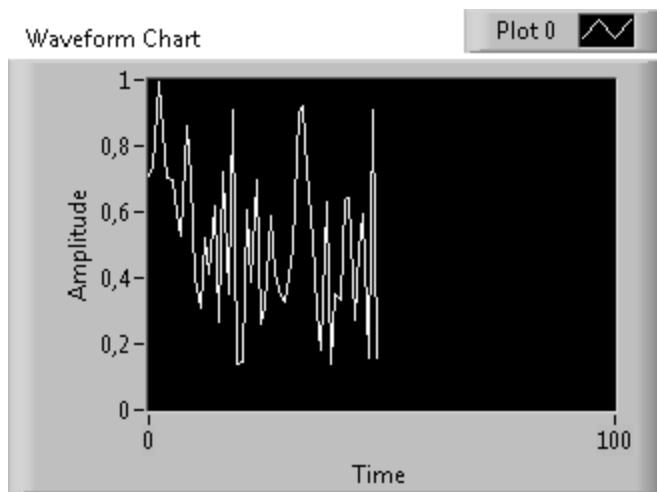


Graphical indicators

- Waveform Chart
- Waveform Graph
- XY Graph

Waveform Chart

- Special type of numeric indicator that displays one or more plots of data typically acquired at a constant rate.



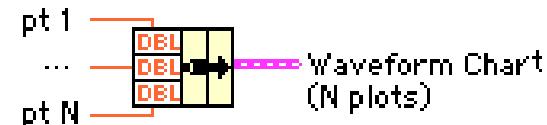
Waveform Charts:

Wire data directly to chart:

Data	Resulting Chart
Scalar	Single plot - 1pt
1D	Single Plot - 1 or more pts
WDT	Single Plot - 1 or more pts
2D	Multiplot - 1 or more pts

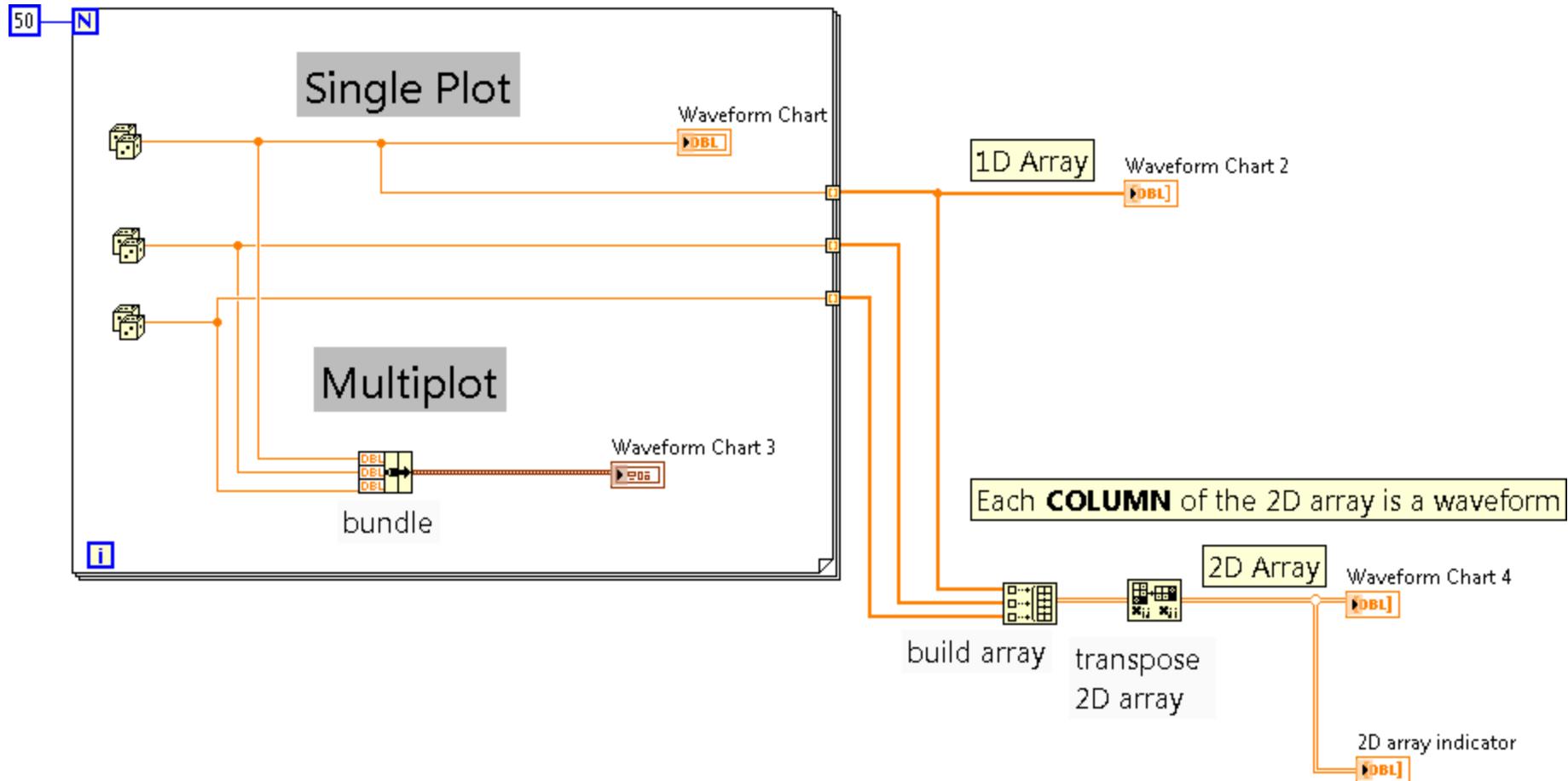
WDT (Waveform Data Type) includes timing info.

Or combine points with a bundle node:



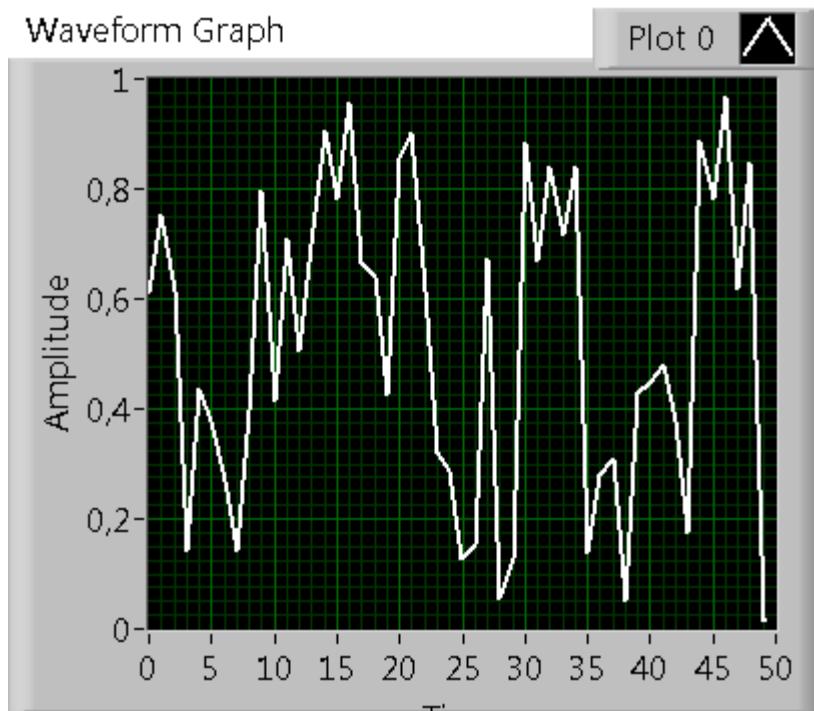
Or use timing information in WDT.

Single and multiple plots in Waveform Charts



Waveform Graph

- Displays one or more plots of **evenly sampled measurements**.



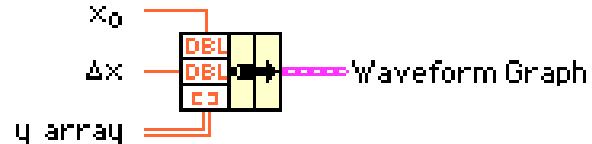
Waveform Graphs:

Wire data directly to waveform graph:

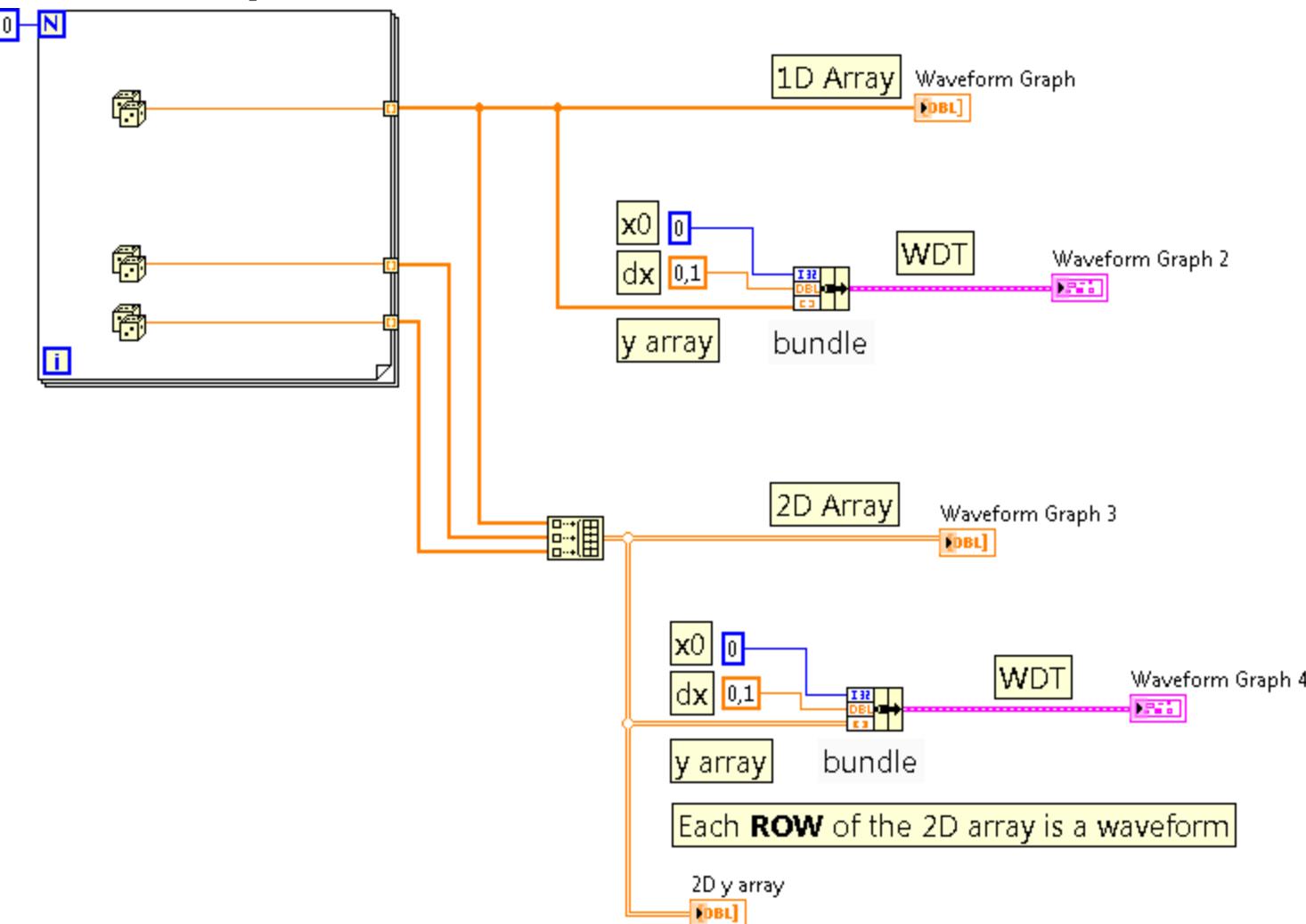
Y Array	Resulting Graph
1D	Single Plot
WDT	Single Plot
2D	Multiplot

WDT (Waveform Data Type) includes timing info.
Others default to 0 for x_0 and 1 for Δx .

Combine timing information using a bundle node:



Single and multiple plots in Waveform Graphs



Single Plot

x0: initial x time
dx: sampling time
y array: 1D/2D input array

WDT:Waveform Data Type

Multiplot

x0: initial x time
dx: sampling time
y array: 1D/2D input array

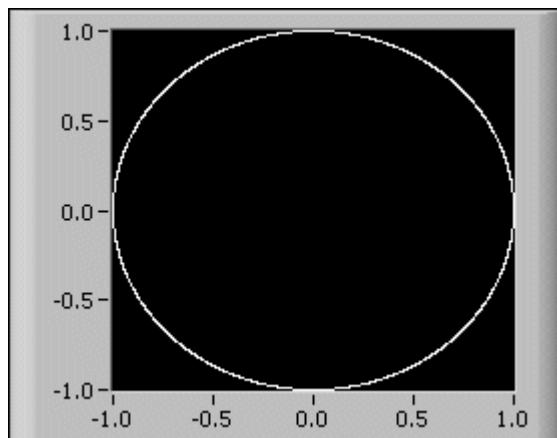
Each **ROW** of the 2D array is a waveform

Difference between W Graph and W Chart

- Wav. graphs and wav. charts **differ** in the way they **display and update data**.
- A W Graph **accepts arrays of data** and plots them at once.
- A W. Chart can accept **scalar data and arrays of data**.
- In a Wav. Graph we can set the **initial time (x0)** and the **step size (dt)**.
- A W. Chart displays a certain number of points by storing them in a buffer.

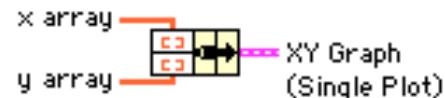
XY Graph

- General-purpose, Cartesian graphing object that plots multivalued functions, such as circular shapes or waveforms with a varying time base.

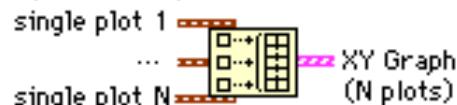


XY Graphs:

Single Plot XY Graph:



Multiplot XY Graph:



Single and multiple plots in XY Graphs

