Titan Tricks

sACN Unicast

The idea for this is from a post in the Facebook group:

Has anyone successfully controlled the Mission Ballroom disco ball with an Avo? Need to unicast sACN to the nodes but can’t find a way to do that.

sACN - or Streaming ACN - is usually used as multicast protocol: the console sends it to a network switch with a special header so that the switch can define groups, one per universe. Nodes and fixtures in turn announce to the switch which universe(s) they need – they **subscribe** to the respective group. The switch then makes sure that each node/fixture receives the data they want, and are not receiving data they do not want. This reduces network traffic and computing load. This mechanism is called **Multicast**.

There is a fallback mechanism in place if some details are missing. In that case the switch defaults to forwarding all sACN data to all nodes/fixtures which requires much more bandwith and strains the network interfaces but makes sure that all participants have a chance to get their data. This is called **Broadcast**.

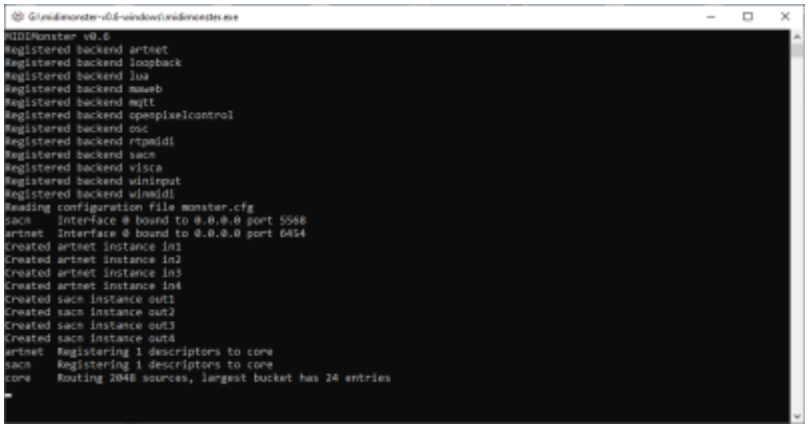
However it looks like there are fixtures in the market which do not support this mechanism but require **Unicast**: they only work with data explicitely sent to them.

(Please excuse this very simplistic explanation. I greatly encourage you to read more on this, and there are plenty of websites dedicated to introducing you to network computing. But for the purpose of this article this might suffice.)

Avolites Titan at the moment (Titan v15, 2022) sends sACN only as Multicast (automatically falling back to Broadcast if bo IGMP capable switch is present). While it has been requested to implement sACN unicast into Titan a solution is required to circumvent this for the time being.

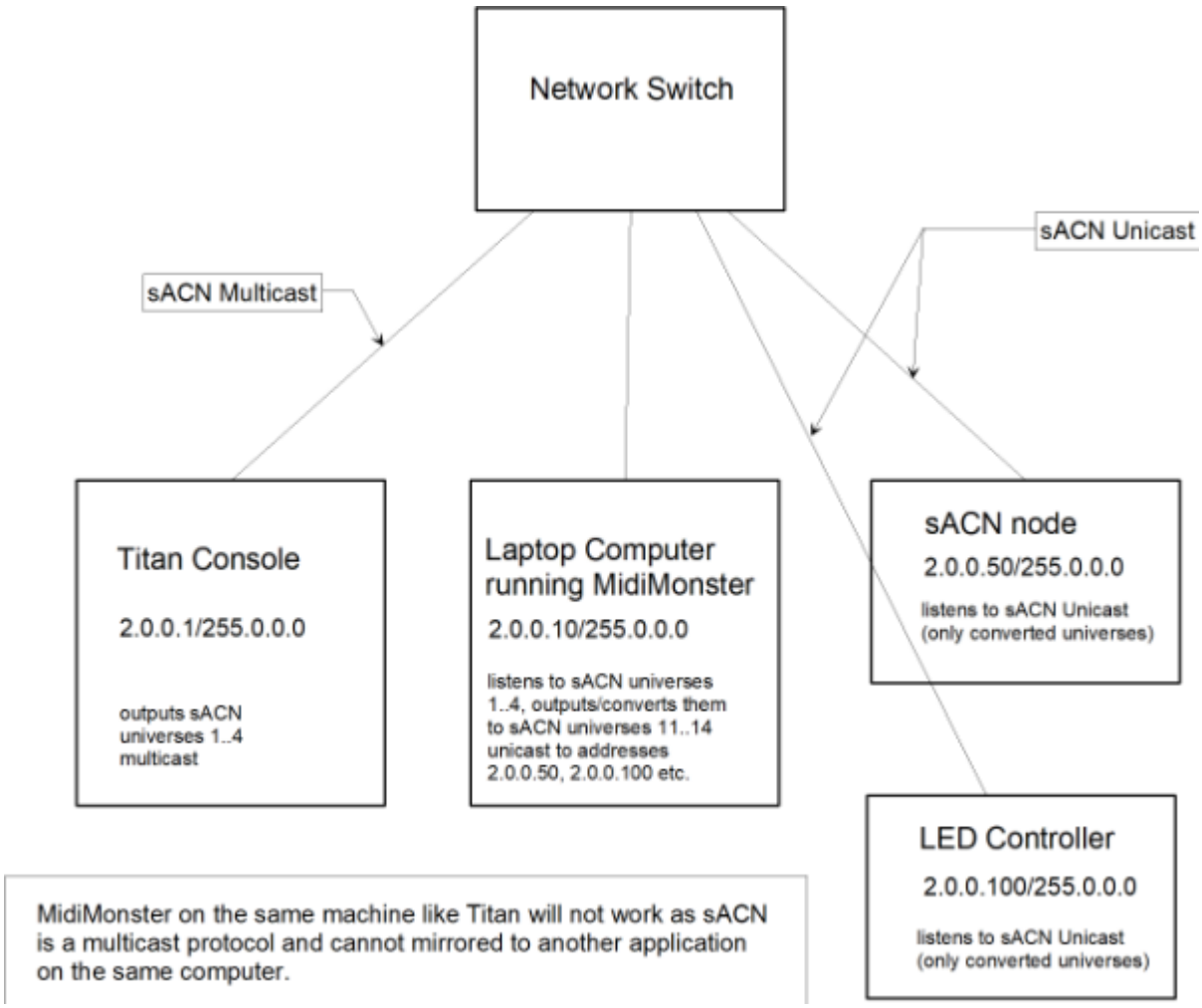
MIDIMonster

… and along comes MIDIMonster. Available at https://midimonster.net this is something like the Swiss Army Knife for lighting protocols. It is a lightweight console application, available for Windows, Linux and OSX, where you simply write a configuration as a text file and then start the program. This comes at the extra benefit that you don't need drivers, nothing being installed, and this can even be run from a USB thumbdrive.



Depending on the situation I successfully tested two scenarios: converting multicast sACN to unicast sACN (sending the data out on different universes) which requires a separate computer, and converting broadcast Art-Net to unicast sACN which may as well run directly on a console.

sACN to sACN, multicast to unicast



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