

BASIC COMPUTER ASSISTED OBSERVING

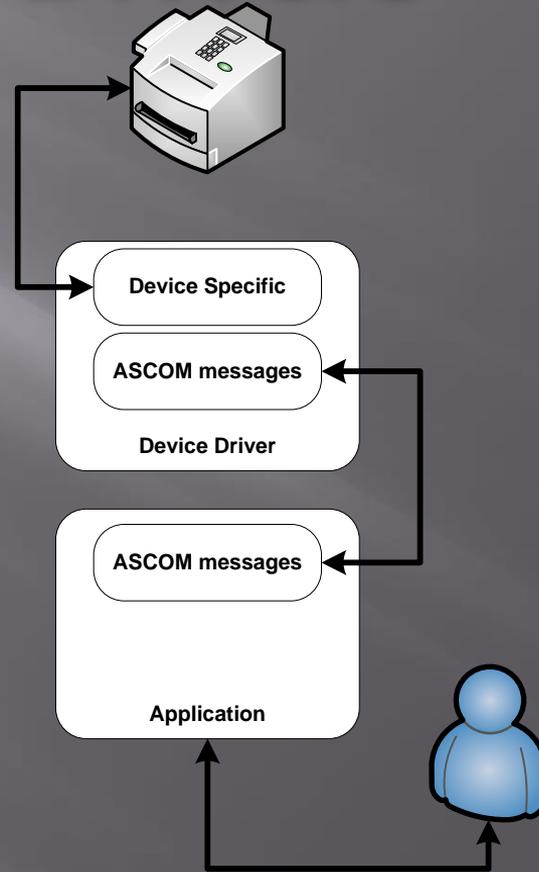
When you can't find things in the
visual view...

Summary

- ▣ Device drivers – Telescope, Dome
- ▣ “Connect” concept
- ▣ Point, Slew, Track actions
- ▣ Telescope control and settings
- ▣ Dome control and settings
- ▣ Planetarium program – Carte du Ciel

Device Drivers

- ▣ Connects to any specialised hardware and manages device/OEM specific messages to/from the device...
- ▣ Interfaces to applications (planetarium, sharpCap, NINA, etc) using standard ASCOM message protocols



“Connect” Concept

- ▣ Connect command:
 - Starts the device driver
 - Establishes the message channel
 - Gives an application access to exposed parameters, capabilities and available commands
 - Configures the device to its startup state

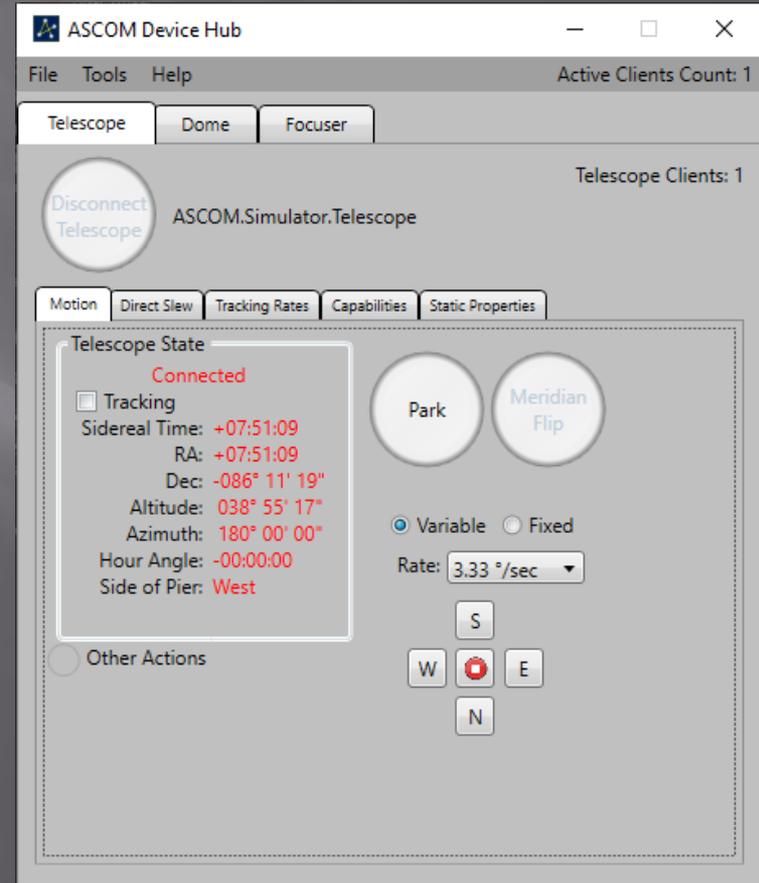
- ▣ Disconnect command:
 - Configures the device to its closedown state
 - Removes application access
 - Closes the message channel
 - Stops the running device driver

Point, Slew & Track

- ▣ Point – sets the RA/Dec coordinates of the desired target
- ▣ Slew – moves the telescope to point at the desired coordinates
- ▣ Track:
 - Can be commanded On or Off
 - sets the RA axis rotation rate - optionally the Dec rate also - to keep the target centred in the view
 - Available rates are - Sidereal, Lunar, Solar & King

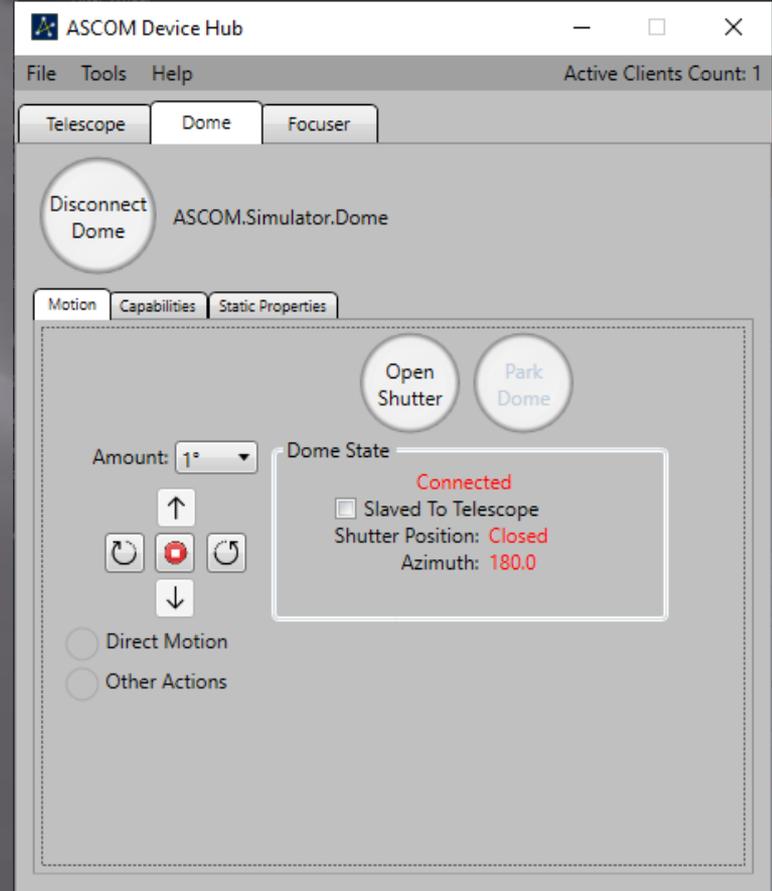
Telescope Control

- Control & Information interface
- The device will respond to any command it receives – e.g. slewing via ASCOM and then handset commands it to stop – it will stop...
- ASCOM allows for multiple clients so different applications can connect to and command the same device...
- The device will attempt to do what it is told as best it can regardless of which client or which interface commanded the action.

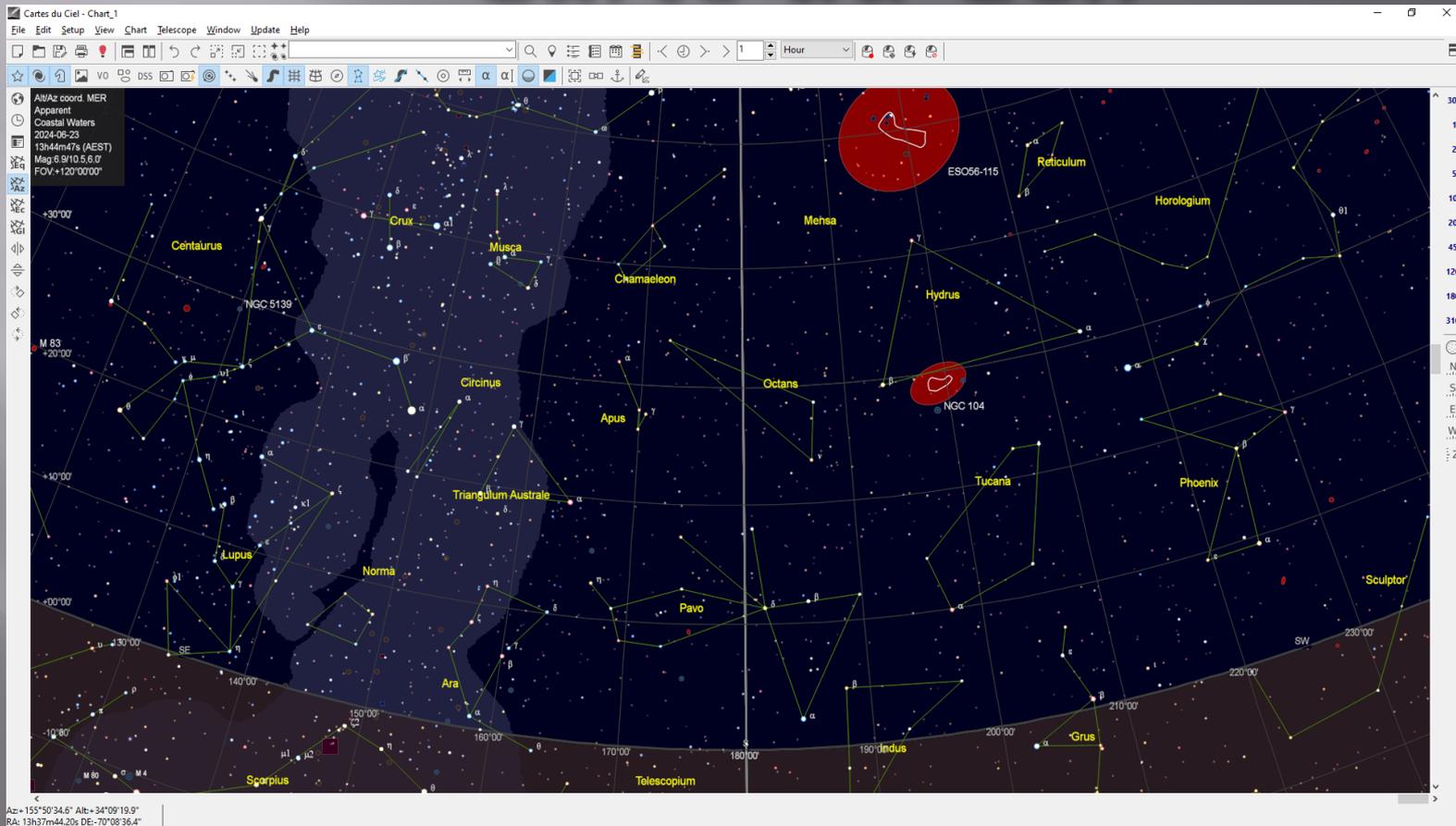


Dome Control

- Just as for the mount, the device will attempt to do what it is told as best it can regardless of which client or interface commanded the action.
- E.g. The dome position is slaved to the telescope but the user turns the dome using the manual control – the dome will turn but then attempt to resync with the telescope position! This can get confusing...



Carte du Ciel



Carte du Ciel

Connect to the telescope...
Once connected:
Right click on an object or
position and select from the
available Telescope menu ...
commands...

The screenshot shows the 'Cartes du Ciel' software window. The main display is a star chart with various constellations labeled, including Musca, Chamaeleon, Hydrus, Circinus, Apus, Triangulum Australe, Norma, Ara, and Pavo. A context menu is open over the star HD 106461, listing several actions. The 'Telescope' option is highlighted, and a sub-menu is visible with 'Connect telescope' checked. The status bar at the bottom provides coordinates and details for the selected star.

Cartes du Ciel - Chart_1

File Edit Setup View Chart Telescope Window Update Help

All/Az coord. MER
Apparent
Coastal Waters
2024-06-23
13h59m43s (AEST)
Mag: 8.3/10.5, 6.0
FOV: +61°26'24"

Musca
Chamaeleon
Hydrus
Circinus
Apus
Triangulum Australe
Norma
Ara
Pavo
Mensa
Tucana

- About HD106461
- All the objects at this position
- Search by name >
- Search by position >
- Centre on
- Zoom + and centre on
- Zoom - and centre on
- Copy coordinates >
- Cleanup map Del
- Finder Circle >
- Observing list >
- Labels >
- Telescope >
- Image list
- Set target to HD106461
- Lock on HD106461

- Slew to HD106461
- Slew to cursor po
- Slew to chart cen
- Sync: HD106461
- Connect telescope
- Abort Slew
- Track telescope

+22°36'07.2" PA:182°
-9h46m50.6s -19°56'16"

RA: 12h21m29.95s DE: -88°33'21.7" Star: HD106461 Visual magnitude: 6.630 Colour index B-V: -0.068
Circumpolar Culmination:18h12m35s

Questions?

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