

# Smart TV

We are starting to see, there is still some way to go, a convergence between our electronic communication devices including our computers. At present making phone calls is only one capability of your phone. It can be used to access the internet, including sending and receiving emails... Most importantly it can run apps. Apps open a pandoras box as almost anything can now be programmed to work with the phone. As well as phones tablets can do anything a phone or computer can. Doctors are using them to do ECGs, we use them for navigation and now we are using them to control our Smart TVs.

Smart TV refers to TVs with integrated internet.

## Prior TVs

Second generation TVs introduced HDMI ports from 1 to as many as four. HDMI ports allow two way communication between the TV and an attached device so that the device could, say, turn the TV on from standby when the device required the TV to display a video. Google (and others) was quick to take advantage of this to allow internet connection.

## Chromecast

Before Smart TVs Google introduced Chromecast<sup>1</sup>, a device which plugged into a HDMI port of the TV, and which connected the internet to the TV.

The Chromecast dongle costs about \$AU50 and plugs into a HDMI slot on the TV. It requires a WIFI connection with a modem and communicates between the TV and the modem. An app is installed on a device such as a tablet or phone which then acts as a controller between the modem and the TV.

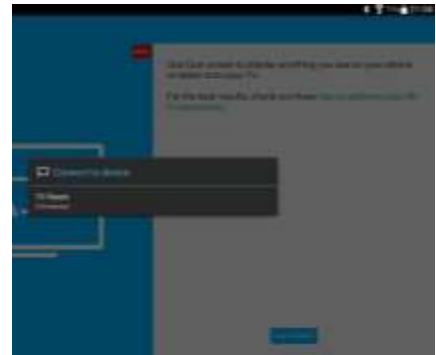


Figure 1 - Chromecast App Dialog

but

The TV we are using for the demonstration today is not a Smart TV does have a HDMI port into which is plugged a Chromecast dongle.

## Requirements

- TV with HDMI slot
- Chromecast dongle
- Modem connected to internet with WIFI access
- Phone or Tablet

You will also need to download the Chromecast app and install it on your device (phone or tablet).

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## Smart TV

This discussion will centre around the Panasonic 65" Curved Screen TV model

## Sources

As well as the sources available on previous generations of TVs such as HDMI, USB, AV and Component we now have computer network connections and Screen Mirroring

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<sup>1</sup> Chromecast: The device, a 72 mm [HDMI dongle](#), plays audio/video content on a [high-definition television](#) or display by directly [streaming](#) it via [Wi-Fi](#) from the Internet or a local network. Users select the media to play using [mobile apps](#) and [web apps](#) that support the Google Cast technology. Alternatively, content can be mirrored from the [Google Chrome](#) web browser running on a personal computer, as well as from the screen of some [Android](#) devices.



Via the *Smart Hub* we can also select Digital Radio, iView (ABC), OnDemand (SBS), YouTube as well as the standard TV channels.



## New Terms

We also have a list of new terms to learn, such as *Casting*, *Mirroring*, ...

**Screen Mirroring** allows you to display the screen of a device (say Phone or Tablet) on the TV screen. This is useful when you want to demonstrate something on phone or other device.

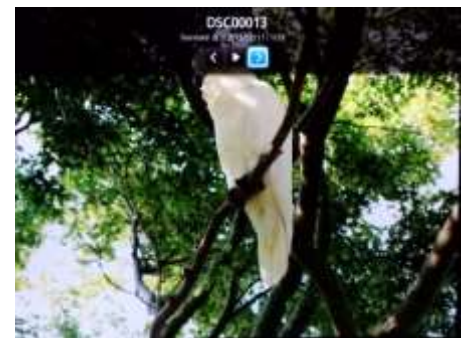


Tablet) your

## Computer Network



Depending on the version of Windows you are using (Home/Pro...) you can set up your computer to be a Media Server and share your Pictures, Videos and Music using DLNA (Digital Living Network Alliance). Smart TVs which implement DLNA can connect to your computer and display and/or play your media. DLNA shares *My Documents*, *Pictures*, *Music* and *Videos*.



## USB

The USB option is not displayed until a USB device is attached then it is very similar to attaching a USB device to your computer.

## Control

You can control your Smart TV by

- A remote control
- Gestures
- A phone or tablet.

The remote control is clunky and awkward to use but suitable for standard TV controls such as changing channel, program guides etc but limited for using internet features such as YouTube.

Gestures sort-of work. Hold your hand up, point to a button and dip your finger to click the button or select an option.

Your Smart Phone or Tablet is excellent for controlling internet apps such as YouTube. We will regularly find a movie or clip in YouTube on the Smart Phone and queue it to play on the Smart TV. It is very easy to create an evening's entertainment this way.

## Casting

When you find the clip you want on your phone or tablet you tap the *Cast* icon to the program over to the Smart TV. **NOTE:** You must have paired the devices.



cast