

## Wireless Presentation Solutions Review

### Purpose

The purpose of this report is to evaluate the current available wireless presentations solutions and to find out a feasible solution which could be implemented in the university. Wireless presentation in the teaching rooms is a business requirement proposed by the CLAD. It enables lecturers to present lecture materials from their mobile tablet or mobile phone to the main projector screen so that lecturers can stroll around the lecture theatre while teaching, allowing better interaction with the students. This document evaluates various hardware and software solutions and analyses their advantages and limitations.

### CLAD Requirements

The wireless presentation solution will need to enable lecturers to present lecture materials from mobile devices (laptop, iPad, Android device etc.) to the main projector screen wirelessly. For example – a lecturer arrives, opens a presentation on an iPad (or even a smart phone), selects a certain option on the lectern control panel and their presentation is shown on the main projection screen. They can then stroll around at the front of the lecture theatre, wirelessly advancing the slides from their device.

### Key Features

- Device agnostic
- Wireless connectivity
- High quality and resilient transmission of video signal, with minimal lag and usable resolution
- Simple to install, initiate and control
- Simple to support and manage (preferably remotely)
- Cost effective across 200+ venues, integrating with existing equipment

### Evaluation of Solutions

#### Hardware Solutions Evaluated

##### 1. [Creston AirMedia Presentation Gateway \(AM-100\)](#)

Creston AirMedia presentation Gateway launched since Oct 2013. It claims that using AirMedia anyone can walk into the room and wirelessly present PowerPoint, Excel, Word, pdf documents and photos on the room display from their own mobile iOS or Android devices. It also supports MacBook and laptops. For mobile devices, it will need to install the free app to connect to AirMedia; for laptop, it can use either web browser or AirMedia application. AirMedia can be also used for collaboration, it supports up to 32 users connect at once. It is a new product and its functions meet the requirements but it comes with a price of £1,200 each device.

##### 2. [Apple TV](#)

Apple TV allows content to be streamed wirelessly from an iOS device (iPad or iPhone) to a TV or Projector. It costs £99 each and it only supports iOS device. It needs to be configured to connect to UOBwifi or a separate closed form wireless network needs to set up to secure the content. This means some changes to the current wireless network configurations across over 200+ venues.

##### 3. [Chromecast](#)

Chromecast was first launched only in America and then made its availability in UK on 19<sup>th</sup> March 2014. It priced at 30 pound per device. It resembles a flash drive but has an HDMI output. It connects to WIFI network and can screencast from any Chrome web browser as well as the full range of apps for Android and iOS. To setup Chromecast, it needs to be connected to a projector with an open HDMI port and a WIFI network. For the presenters, they will need to have a laptop or PC or mobile device with the chrome browser, the Google Cast browser extension installed and connected to the same WIFI network as the Chromecast.

##### 4. [Belkin Screen Cast](#)

Belkin Screen Cast can stream video from laptop to TV or projector wireless, however it doesn't support mobile

devices.

## Software Solutions

Currently there is no software solution that can work with both iOS and Android device, so the software solutions for iOS devices and Android device will be discussed separately.

For iOS devices:

1. AirServer (<http://www.airserver.com/>): Airserver is an AirPlay receiver software for Mac and PC. It allows users to receive AirPlay feeds, so user can stream content or Mirror the display from iOS devices. Price, \$14.99 each.
2. Reflector (<http://www.airsquirrels.com/reflector/>): provides similar functions as AirServer, allows user wireless mirror iPad, iPhone or iPod Touch screen to any Mac or PC. Price, \$12.99 each.

For Android Device, using software applications to wireless mirror android device is not a straight forward task. These applications are mainly for developers to use and need some configuration both on the mobile devices and the PC/laptop. They are also quite strict with versions of the mobile OS. The tested applications include [BBQ Screen](#) and [Droid@Screen](#). During testing, the screen casting is a little bit clumsy and has several occasions that screen suddenly stopped mirroring.

The table below listed the comparisons of the solutions mentioned above.

	Advantages	Limitations
<b>Hardware Solutions</b>		
Creston AirMedia Presentation Gateway (AM-100)	All around solution for mobile devices	Expensive
Apple TV	Stabilized solution for apple product	Not compatible with Android device Further wireless network configuration
Chromecast	Cost effective; All around solutions for mobile devices	Further wireless network configuration
Belkin screen Cast	Only works with windows laptop	Not compatible with tablet or mobile
<b>Software solutions</b>		
AirServer/Reflector	Cost effective; Works for iOS device	Not compatible with Android device; Quite complex to setup and initiate
BBQ Screen/ Droid@Screen	Cost effective Works for Android devices	Not compatible with Apple device; Quite complex to setup; Not very stable

## Conclusions

There is a growing demand for wireless presentation solutions in the teaching room.

Technology is currently very fast-moving on this field.

Chromecast could be a possible way forward as it is cost effective at £30 pound per device per projector. It supports laptops and mobile devices including both Android and iOS, and it connects to WIFI network. It could be worth testing it further in a few lecture theatres first to evaluate its feasibility and reliability prior to making further recommendations.

## Recommendations

- Wait until the technology is further developed
- Chromecast could be a possible solution
- Security is a key issue to be resolved: the wireless network will need to be configured in order to connect in a secure way