Australian Competition & Consumer Commission

GPO Box 3131
Canberra ACT 2601

23 Marcus Clarke Street
Canberra ACT 2601

tel: (02) 6243 1111
fax: (02) 6243 1199

www.accc.gov.au

Our Ref: CTM1528270
Contact Officer: Joanne Palisi
Contact Phone: 02 6243 1323

26 February 2015

The Registrar of Trade Marks
IP Australia
PO Box 200
WODEN ACT 2606

By email: fep@ipaustralia.gov.au

Dear Registrar

Certification Trade Mark (CTM) Application No. 1528270
– Wi-Fi Alliance – MIRACAST

The Australian Competition and Consumer Commission (the **ACCC**), in accordance with the provisions of the *Trade Marks Act 1995*, has completed its final assessment of Certification Trade Mark (CTM) No. 1528270 (MIRACAST) lodged by Wi-Fi Alliance.

A certificate detailing the ACCC's assessment is attached, as is a certified copy of the CTM rules. The applicant has been notified.

If you have any inquiries about this matter, please contact me on 02 6243 1323.

Yours sincerely

Joanne Palisi
Director
Coordination and Strategy Branch
Merger and Authorisation Review Division

Australian
Competition &
Consumer
Commission

Final Assessment of Certification Trade Mark Application 1528270 – Wi-Fi Alliance – MIRACAST

The Australian Competition and Consumer Commission (ACCC), in accordance with the requirements of the *Trade Marks Act 1995*, has completed its Final Assessment of the above Certification Trade Mark (CTM) application.

The ACCC's Final Assessment is that it is satisfied that:

(a) the approved certifiers demonstrate the attributes necessary to competently certify the products in respect of which the CTM is to be registered;

(b) the rules governing the use of the CTM would not be to the detriment of the public; and

(c) the rules governing the use of the CTM are satisfactory having regard to the principles relating to restrictive trade practices set out in Part IV of the *Competition and Consumer Act 2010* (the CCA) and the principles relating to unconscionable conduct (Part 2-2), unfair practices (Part 3-1), and safety of consumer goods and product related services (Part 3-3) in Schedule 2 (Australian Consumer Law) of the CCA.

Signed.....Michael Sloper.....**(Deputy Chair)**

Date.....25 February 2015.....

Regulations for MIRACAST Certification Mark

1. These regulations govern the use of the MIRACAST Certification Mark, which is owned by Wi-Fi Alliance and used in connection with the administration of the MIRACAST certification program.

2. **Wi-Fi Alliance.**

2.1. Wi-Fi Alliance is a nonprofit mutual benefit corporation organized under the laws of the State of California in the United States. The purpose of Wi-Fi Alliance is to promote multi-vendor interoperability for markets including the enterprise, small office, and home and in particular the development, adoption and use of wireless networking technology based on the IEEE 802.11 standard and products and services relating thereto.

2.2. To ensure interoperability among the wireless local area networking products from multiple manufacturers and to promote this technology within both the business and consumer markets, Wi-Fi Alliance has developed certain specifications for wireless devices and administers certification programs based on these specifications.

3. **Membership.**

3.1. **Qualifications for Membership.** As set forth in the Bylaws of Wi-Fi Alliance, which are available on the Wi-Fi Alliance web site at www.wi-fi.org, any company shall be eligible to be a member of Wi-Fi Alliance if it demonstrates that it is dedicated to the purposes of this corporation by

3.1.1. Publicly displaying a legitimate business interest; AND

3.1.2. Publicly supporting, in the form of a press release or as evidenced by shipping products or enabling technology for wireless networking products, or deploying for public access products employing 802.11-based specifications for wireless local area networks; AND

3.1.3. Receiving approval of the membership application by the board; AND

3.1.4. Paying such dues and fees as the Board of Directors of Wi-Fi Alliance (the "Board") may fix from time to time. The schedule of dues and fees is set forth on the Wi-Fi Alliance web site at www.wi-fi.org.

3.2. **Good Standing.** Those members who have paid the required dues, fees, and assessments in accordance with the Bylaws of Wi-Fi Alliance and who are not suspended are members in good standing.

3.3. **Suspension and Termination.** Grounds and procedures for suspension and termination of membership in Wi-Fi Alliance are set forth in the Bylaws of Wi-Fi Alliance.

4. **The MIRACAST Mark**

4.1. MIRACAST is a certification mark for certifying the characteristics of computer hardware and peripherals and related devices, including wireless local area networking products, mobile phones, cameras, notebook computers, tablet computers, optical disc players, home theater audio and video equipment, video projection devices, digital video recorders, televisions, video game consoles, and portable gaming devices.

4.2. Wi-Fi Alliance is the owner of the MIRACAST certification mark.

4.3. Use of the MIRACAST certification mark in connection with a particular device is

conditioned on each of the following conditions:

4.3.1. The licensee has entered into a license agreement governing the use of the mark and has agreed to use the mark in accordance with the provisions of Wi-Fi Alliance. The Certification Mark License Agreement is available on the Wi-Fi Alliance web site at www.wi-fi.org.

4.3.2. The licensee is a member in good standing of Wi-Fi Alliance.

4.3.3. The device has successfully completed testing to demonstrate compliance with Wi-Fi Alliance's Wi-Fi Display Specification with respect to the ability of devices to mirror displays and stream graphical, textual, audio, and video content between wireless devices through a direct, peer-to-peer connection.

4.3.3.1. Testing is performed at laboratories accredited by Wi-Fi Alliance to perform certification testing for Wi-Fi Alliance members. The authorized lab tests the device to determine whether it meets the required technical capabilities set forth in Wi-Fi Alliance's Wi-Fi Display Specification. The authorized test labs include:

Allion Test Labs, Inc.
9F, No.3-1, Yuan Ku Street
Taipei, Taiwan 11503

AT4 Wireless Interoperability Certification Lab
Centro de Tecnología de las Comunicaciones S. A.
Severo Ochoa, 2
29590, Campanillas
Malaga, Spain

Bureau Veritas ADT
No. 19, Hwaya 2nd Rd., Kweishan Township
Taoyuan County 33383, Taiwan

CETECOM Inc.
411 Dixon Landing Road
Milpitas, CA 95035
U.S.A.

SGS Group
18-34, Sanbon-dong, Gunpo-city,
Gyeonggi-do 435-040
Korea

Telecommunications Technology Association
267-2 Seohyeon-dong, Bundang-gu, Seongnam-City
Gyeonggi-do 463-824
Korea

TMC China's Interoperability Certification Lab
Telecommunication Metrology Center of MIIT
No. 52 Hua Yuanbei Road,
Hai Dian District, Beijing
100191, China

4.3.3.2. In order for a device to be certified under the MIRACAST certification program, the testing must show that the device provides a transmission

channel based on the IEEE 802.11n standard; provides direct, peer-to-peer connectivity based on the Wi-Fi Peer-to-Peer Specification; incorporates security features based on the IEEE 802.11i/AES standard; incorporates specified multimedia-prioritizing quality-of-service features; and incorporates specified user-configuration functionality based on the Wi-Fi Simple Configuration Specification.

4.3.4. Wi-Fi Alliance has formally issued a certification of the device based on the results of accredited testing lab.

4.3.5. The licensee has agreed to the terms of Wi-Fi Alliance's Certification Mark License Agreement, which provides that:

4.3.5.1. The licensee shall comply with all requirements in the Wi-Fi Alliance Brand Styleguide, available on the Wi-Fi Alliance web site at www.wi-fi.org.

4.3.5.2. The licensee shall comply with all technical requirements of certification.

4.3.5.3. The licensee will notify Wi-Fi Alliance in writing of any change to the name of the certified product and will not adopt a name for the certified product that may cause confusion as to the certification status of any feature or function of the certified product.

4.3.5.4. The licensee may not modify the certified product in any manner that results in more than an immaterial change in features, function, or performance, without disclosing such modifications to Wi-Fi Alliance in writing and re-submitting the certified product for certification at the licensee's sole cost and expense if Wi-Fi Alliance in its sole discretion determines that re-testing is warranted.

4.3.5.5. If the certified product consists of a product module that was initially tested in combination with one or more specific devices, the licensee may not use the certified product with different devices without first notifying Wi-Fi Alliance in writing of such substitution and providing Wi-Fi Alliance with details concerning the substituted devices and written assurances that the use of substituted devices will not affect in more than an immaterial degree the performance and functionality of the certified product. The licensee must comply with Wi-Fi Alliance's requests for additional information regarding the substituted devices and, at its sole cost and expense, to re-submit the certified product for certification if Wi-Fi Alliance in its sole discretion determines that re-testing is warranted.

4.3.5.6. The MIRACAST certification mark may only be used in connection with the certified device.

4.3.5.7. The licensee may not modify, enhance, or change the MIRACAST certification mark.

4.3.5.8. The licensee may not use the MIRACAST certification mark as a domain name or the name of a service or company.

4.3.5.9. The licensee may not use the MIRACAST certification mark (a) in any manner that is likely to reduce, diminish or damage the goodwill, value or reputation associated with the mark; (b) in any manner as would

violate the rights of any third parties; (c) in any manner as would result in any third-party claim or in any governmental investigation, claim, or proceeding alleging unlawful or improper use of the mark; (d) on or in connection with any products or services other than the certified products and promotional materials pertaining to the certified products; or (e) in any manner other than as a certification mark.

4.3.5.10. The licensee will, upon Wi-Fi Alliance's request and at no cost to Wi-Fi Alliance, provide Wi-Fi Alliance with a reasonable number of samples of the certified product.

4.3.5.11. If at any time the certified product fails in more than an immaterial degree to conform to the standards and specifications that were the basis for the certification, the licensee will immediately cease all use of the MIRACAST certification mark on its undistributed certified product units. Upon request of Wi-Fi Alliance, the licensee will also notify all distributors and customers who may have non-compliant certified product units and advertising therefor bearing the MIRACAST certification mark.

4.3.5.12. The licensee must immediately and at its sole cost and expense correct any usage of the MIRACAST certification mark that Wi-Fi Alliance regards as failing to comply with the regulations governing such usage.

4.3.5.13. The licensee acknowledges that if it engages in any unauthorized use of or reference to the MIRACAST certification mark, its right to continue using the MIRACAST certification mark may be terminated. Licensee further acknowledges that Wi-Fi Alliance will be irreparably injured if such unauthorized use continues.

4.4. Wi-Fi Alliance maintains a register of authorized users of the MIRACAST certification mark, and the specific devices in connection which those users may use the MIRACAST certification mark, on its publicly available web site at www.wi-fi.org. This register contains the name of the Wi-Fi Alliance member, the name of the certified product, the model number of the certified product, the date of the product's certification, and a copy of the certificate of interoperability for the product.

5. **Fees for Using the MIRACAST Certification Mark.** Although there may be a fee payable to the independent test lab for the certification testing of a particular device, there are no fees payable to Wi-Fi Alliance for using the MIRACAST certification mark.

6. **Dispute Resolution.**

6.1. The staff of Wi-Fi Alliance will resolve any disputes between members and test labs regarding whether a particular device has been or should be certified. In the event of a dispute that cannot be resolved by Wi-Fi Alliance staff, the Board of Directors will take the issue under independent consideration and render a final decision. The Directors receive no financial compensation from Wi-Fi Alliance for their Board service and therefore have no incentive to resolve disputes with a bias against members.

6.2. The Certification Mark License Agreement which all licensees must enter into in order to use the MIRACAST certification mark provides that licensees submit to the jurisdiction of the California courts and that disagreements between licensees and Wi-Fi Alliance regarding use of the MIRACAST mark must be brought in a court in the County of Santa Clara in California, U.S.A.

Wi-Fi Display Technical Specification

(MIRACAST Certification Program)

Overview

Implementation results in functionality for seamless sharing of video content between devices, with devices identifying and connecting to each other, managing their connections, and optimizing transmission of content based on the device capabilities and network conditions.

The specification supports four different topologies: (1) direct source to display device, with no access point present; (2) direct source to display device with an access point present but with the source and display devices not connected to the access point; (3) source with access point connection and direct connection to display device, with content streamed from access point to source to display device; and (4) source and display devices connected to each other and to an access point, with source streaming content to display either directly or through the access point.

The session begins with a request from the user either from the source or from the display device. The content must be present on the source device and may be acquired through streaming, copying, or downloading the content, or may be generated by the source device itself.

Once the content is available for transmitting, the source device identifies available display devices and their respective capabilities and asks the user which device should act as the display. The source device establishes a link with the chosen display device in preparation for transmission. Once the connection is established, the source device encodes the content, taking into account display device capabilities and channel conditions to optimize transmission over the wireless interface. The display device receives the content, decodes it, and renders it.

Supported Formats

Display Resolution	• Consumer Electronics Association formats, from 640 x 480 up to 1920 x 1080 pixels, and from 24 to 60 frames per second (fps) • Video Electronics Standards Association formats, from 800 x 600 up to 1920 x 1200 pixels, and from 30 to 60 fps • Handled formats, from 640 x 360 up to 960 x 540 pixels, and from 3- to 60 fps
Video	• ITU-T H.264 for high-definition video, supporting the Constrained Baseline Profile (CBP) and Constrained High Profile (CHP), at levels ranging from 3.1 to 4.2
Audio	• Mandated codec: Linear Pulse-Code Modulation (LPCM) 16 bits, 48 kHz sampling, 2 channels • Optional audio codecs, based on: o LPCM mode 16 bits, 44.1 kHz sampling, 2 channels o Advanced Audio Coding (AAC) modes o Dolby Advanced Codec 3 (AC3) modes

Mechanisms

Wi-Fi Display uses the wireless medium access control (MAC) and physical (PHY) layers as its foundation. It relies on the vendor-specific user interface (UI) to manage the user inputs and preferences. Vendor session policy management is relied upon to initiate device discovery and selection, authorize the link between the source and the display devices, store the user profile, and manage the traffic.

Session Management Stages

Device discovery	Source and display devices discover each other prior to connection setup using a peer-to-peer wireless connection
Device selection	A remote device is selected for connection setup. User input and local policies may be used to decide which device is a display and which is a source.
Connection setup	Connection setup selects a method to manage the connection (direct peer-to-peer or Tunneled Direct Link Setup (TDLS)). A group owner and client is set up to initiate a device-to-device link. A secure single-hop link with selected devices is established. Upon the establishment of connectivity between the source and display devices, the display initiates a Transmission Control Protocol (TCP) connection, with a control port using Real-Time Streaming Protocol (RTSP) to create and manage the sessions between source and display devices.
Session establishment and streaming	Upon completion of capability negotiation, the source and display devices set up the session prior to streaming content. The audio and video content available on the source device is packetized using Moving Picture Experts Group 2 Transport Stream (MPEG2-TS) coding and encapsulated by Real-Time Protocol (RTP) User Data Protocol (UDP) and Internet Protocol (IP). The source device sends content to the display device using wireless packetization.
Payload control	When the payload transfer starts, devices may adapt transmission parameters on the basis of channel conditions and power consumption. Adaptation can be achieved by: • Compression ratio change and macroblock skipping (using the H.264 standard) • Frame skipping (if the display device supports this functionality, the source device may skip some of the frames to be transmitted according to the current resolution) • Format change
Display session teardown	Either the source or the display device terminates the session