UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF WASHINGTON

TRIUMPH IP LLC,

Plaintiff,

v.

SPORTS ART AMERICA, INC.,

Defendant.

Case No. 2:22-cv-1350

COMPLAINT FOR PATENT INFRINGEMENT

DEMAND FOR JURY TRIAL

Plaintiff Triumph IP LLC files this Complaint for Patent Infringement against Sports Art America, Inc., and would respectfully show the Court as follows:

I. NATURE OF THE LAWSUIT

1. This is an action for patent infringement under the Patent Laws of the United States, Title 35 United States Code ("U.S.C.") resulting from Sports Art America, Inc., infringing, in an illegal and unauthorized manner and without authorization and/or consent from Triumph IP LLC, United States Patent No. 7,177,291, pursuant to 35 U.S.C. §271, and to recover damages, attorney's fees, and costs.

II. THE PARTIES

1. Plaintiff Triumph IP LLC ("Triumph" or "Plaintiff") is a Texas limited liability company having an address at 1401 Lavaca Street, Suite 922, Austin, TX 78701.

2. On information and belief, Defendant Sports Art America, Inc., ("Defendant") is a corporation organized and existing under the laws of Washington, with a registered agent MN Service Corporation (WA) at 2801 Alaskan Way, STE 300, Seattle, WA 98121.

MANN LAW GROUP PLLC
403 Madison Ave. N. Ste.240
Bainbridge Island, WA 98110
TELEPHONE: 206.436-0900 P

III. JURISDICTION AND VENUE

3. This action arises under the patent laws of the United States, Title 35 of the United States Code. This Court has subject matter jurisdiction of such action under 28 U.S.C. §§ 1331 and 1338(a).

4. On information and belief, Defendant is subject to this Court's specific and general personal jurisdiction, pursuant to due process and the Washington Long-Arm Statute, due at least to its business in this forum, including at least a portion of the infringements alleged herein. Furthermore, Defendant is subject to this Court's specific and general personal jurisdiction because Defendant is a Washington corporation.

5. Without limitation, on information and belief, within this State and this District, Defendant has used the patented inventions thereby committing, and continuing to commit, acts of patent infringement alleged herein. In addition, on information and belief, Defendant has derived revenues from its infringing acts occurring within Washington and the Western District of Washington. Further, on information and belief, Defendant is subject to the Court's general jurisdiction, including from regularly doing or soliciting business, engaging in other persistent courses of conduct, and deriving substantial revenue from goods and services provided to persons or entities in Washington and the Western District of Washington. Further, on information and belief, Defendant is subject to the Court's personal jurisdiction at least due to its sale of products and/or services within Washington and the Western District of Washington. Defendant has committed such purposeful acts and/or transactions in Washington and the Western District of Washington such that it reasonably should know and expect that it could be haled into this Court as a consequence of such activity.

6. Venue is proper in this district under 28 U.S.C. § 1400(b). On information and belief, Defendant is incorporated in Washington, and it has a place of business within this

MANN LAW GROUP PLLC
403 Madison Ave. N. Ste.240
Bainbridge Island, WA 98110
TELEPHONE: 206.436-0900 P

District. On information and belief, from and within this District Defendant has committed at least a portion of the infringements at issue in this case.

7. For these reasons, personal jurisdiction exists and venue is proper in this Court under 28 U.S.C. § 1400(b).

IV. COUNT I
(PATENT INFRINGEMENT OF UNITED STATES PATENT NO. 7,177,291)

8. Plaintiff incorporates the above paragraphs herein by reference.

9. On February 13, 2007, United States Patent No. 7,177,291 ("the '291 Patent") was duly and legally issued by the United States Patent and Trademark Office. The '291 Patent is titled "Method for Associating an Apparatus in a Communication Network." The term of the '291 patent has been adjusted by 1,126 days. A true and correct copy of the '291 Patent is attached hereto as Exhibit A and incorporated herein by reference.

10. Triumph is the assignee of all right, title, and interest in the '291 patent, including all rights to enforce and prosecute actions for infringement and to collect damages for all relevant times against infringers of the '291 Patent. Accordingly, Triumph possesses the exclusive right and standing to prosecute the present action for infringement of the '291 Patent by Defendant.

11. The invention in the '291 Patent relates to the field of associating an apparatus to a communication network capable of sharing the same transmission frequency resources as another neighboring network. (Ex. A at col. 1:9-12). The inventor's recognized inefficiencies of the prior art when the collision of the frames originating from two networks contacting the same apparatus and developed an improved method. (*Id*. at col. 1:38-40).

12. Local networks using sharing of the radio resource in Frequency Division Multiple Access ("FDMA") mode are required to use one channel from among a finite set of channels, which is given and granted by the standardizing bodies. (*Id.* at col. 1:19-22). To avoid

MANN LAW GROUP PLLC
403 Madison Ave. N. Ste.240
Bainbridge Island, WA 98110
TELEPHONE: 206.436-0900 P

mutual disturbance, it is oven advisable to implement techniques for probing various channels. (*Id.* at col. 1:23-24). Equipment wishing to create a wireless network will listen to channels and choose a channel which it deems to be free of any radio activity, using a dynamic frequency selection ("DFS") mechanism. (*Id.* at col. 1:26-30). However, when there are multiple local networks, it is possible that two networks, though geographically close, may have chosen the same frequency, without interfering with one another. (*Id*. at col. 1:31-34). This is all the more probable the lower the number of channels dedicated to this service. (*Id.* at col. 1:34-35). It may be the case where an apparatus which has to associate itself with a network may also be able to communicate with a base station of another network, causing the problem of the collision of frames originating from the two networks at the level of the apparatus. (*Id.* at col. 1:36-40).

13. The inventors recognized that they could reduce the collision of frames in a communications network when associating an apparatus to a first communication network by performing the steps of detecting by the apparatus a first transmission channel, determining a collision on the channel between signals originating from the first network and from a second network; in case of collision, transmitting a change of channel request to the first network, and associating the apparatus with a base station of the first network following non-detection of a collision. (*Id.* at col. 4:41-53).

14. **Direct Infringement.** Upon information and belief, Defendant has been directly infringing at least claim 1 of the '291 patent in Washington, and elsewhere in the United States, by performing actions comprising at least performing the claimed process for associating an apparatus to a first communication network with transmissions in the first network being performed on a first channel using the SportsArt C574U-13 ("Accused Instrumentality") (*e.g.*, https://www.gosportsart.com/wp-content/uploads/documentation/C574U-13_Sell_ENG.pdf).

MANN LAW GROUP PLLC
403 Madison Ave. N. Ste.240
Bainbridge Island, WA 98110
TELEPHONE: 206.436-0900 P

15. The Accused Instrumentality practices a process for associating an apparatus (*e.g.*, the Accused Instrumentality) to a first communication network (*e.g.*, Wi-Fi network of an access point), with transmissions in the first network being performed on a first channel (*e.g.*, a communication channel). The Accused Instrumentality supports IEEE 802.11n standard and gets associated with an access point according to the standard.

(*E.g.*, https://www.gosportsart.com/wp-content/uploads/documentation/C574U-13_Sell_ENG.pdf).

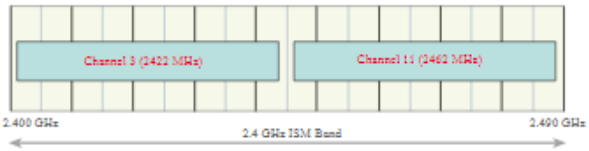
MANN LAW GROUP PLLC
403 Madison Ave. N. Ste.240
Bainbridge Island, WA 98110
TELEPHONE: 206.436-0900 P

The IEEE 802.11 HT STA provides physical layer (PHY) and medium access control (MAC) features that can support a throughput of 100 Mb/s and greater, as measured at the MAC data service access point (SAP). An HT STA supports HT features as identified in Clause 9 and Clause 20. An HT STA operating in the 5 GHz band supports transmission and reception of frames that are compliant with mandatory PHY specifications as defined in Clause 17. An HT STA operating in the 2.4 GHz band supports transmission and reception of frames that are compliant with mandatory PHY specifications as defined in Clause 18 and Clause 19. An HT STA is also a quality of service (QoS) STA. The HT features are available to HT STAs associated with an HT access point (AP) in a basic service set (BSS). A subset of the HT features is available for use between two HT STAs that are members of the same independent basic service set (IBSS).

An HT STA has PHY features consisting of the modulation and coding scheme (MCS) set described in 20.3.5 and physical layer convergence procedure (PLCP) protocol data unit (PPDU) formats described in 20.1.4. Some PHY features that distinguish an HT STA from a non-HT STA are referred to as multiple input, multiple output (MIMO) operation; spatial multiplexing (SM); spatial mapping (including transmit beamforming); space-time block coding (STBC); low-density parity check (LDPC) encoding; and antenna selection (ASEL). The allowed PPDU formats are non-HT format, HT-mixed format, and HT-greenfield format. The PPDUs may be transmitted with 20 MHz or 40 MHz bandwidth.

(*E.g.*, https://standards.ieee.org/standard/802_11n-2009.html).

With the use of IEEE 802.11n, there is the possibility of using signal bandwidths of either 20 MHz or 40 MHz. When 40 MHz bandwidth is used to gain the higher data throughput, this obviously reduces the number of channels that can be used.



IEEE 802.11n 2.4 GHz Wi-Fi 40 MHz channels, frequencies & channel numbers.

(*E.g.*, https://www.electronics-notes.com/articles/connectivity/wifi-ieee-802-11/channels-frequencies-bands-bandwidth.php).

MANN LAW GROUP PLLC
403 Madison Ave. N. Ste.240
Bainbridge Island, WA 98110
TELEPHONE: 206.436-0900 P

11.14.2 Basic 20/40 MHz BSS functionality

An HT AP declares its channel width capability (20 MHz only or 20/40 MHz) in the Supported Channel Width Set subfield of the HT Capabilities element.

An HT AP shall set the STA Channel Width field to 1 in frames in which it has set the Secondary Channel Offset field to SCA or SCB. An HT AP shall set the STA Channel Width field to 0 in frames in which it has set the Secondary Channel Offset field to SCN.

A non-AP HT STA declares its channel width capability (non-FC HT STA or FC HT STA) in the Supported Channel Width Set subfield in the HT Capabilities element.

If the AP or IDO STA starts a 20/40 MHz BSS in the 5 GHz band and the BSS occupies the same two channels as any existing 20/40 MHz BSSs, then the AP or IDO STA shall ensure that the primary channel of the new BSS is identical to the primary channel of the existing 20/40 MHz BSSs and that the secondary channel of the new 20/40 MHz BSS is identical to the secondary channel of the existing 20/40 MHz BSSs, unless the AP discovers that on these two channels are existing 20/40 MHz BSSs with different primary and secondary channels.

(*E.g.*, https://standards.ieee.org/standard/802_11n-2009.html).

16. Upon information and belief, the Accused Instrumentality practices detecting by said apparatus (*e.g.*, the Accused Instrumentality) of the first transmission channel (*e.g.*, a communication channel). The Accused Instrumentality supports IEEE 802.11n standard. It gets associated with an access point according to the standard. It receives a high throughput operation element from the access point and determines a primary and secondary channel pair for data transmission with the access point.

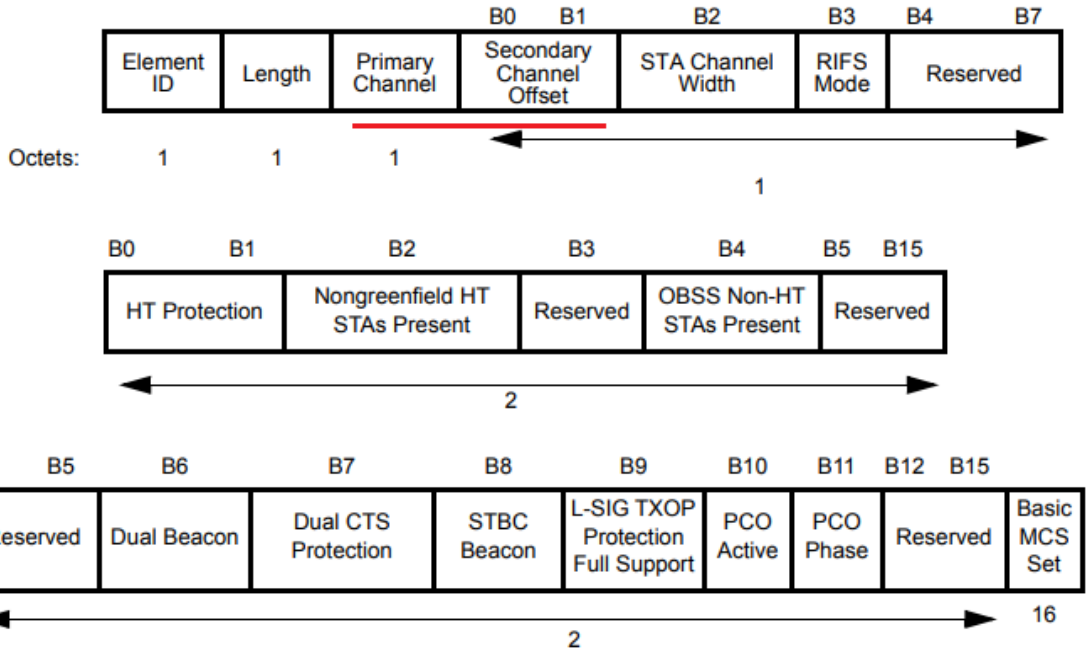
MANN LAW GROUP PLLC
403 Madison Ave. N. Ste.240
Bainbridge Island, WA 98110
TELEPHONE: 206.436-0900 P

The IEEE 802.11 HT STA provides physical layer (PHY) and medium access control (MAC) features that can support a throughput of 100 Mb/s and greater, as measured at the MAC data service access point (SAP). An HT STA supports HT features as identified in Clause 9 and Clause 20. An HT STA operating in the 5 GHz band supports transmission and reception of frames that are compliant with mandatory PHY specifications as defined in Clause 17. An HT STA operating in the 2.4 GHz band supports transmission and reception of frames that are compliant with mandatory PHY specifications as defined in Clause 18 and Clause 19. An HT STA is also a quality of service (QoS) STA. The HT features are available to HT STAs associated with an HT access point (AP) in a basic service set (BSS). A subset of the HT features is available for use between two HT STAs that are members of the same independent basic service set (IBSS).

An HT STA has PHY features consisting of the modulation and coding scheme (MCS) set described in 20.3.5 and physical layer convergence procedure (PLCP) protocol data unit (PPDU) formats described in 20.1.4. Some PHY features that distinguish an HT STA from a non-HT STA are referred to as multiple input, multiple output (MIMO) operation; spatial multiplexing (SM); spatial mapping (including transmit beamforming); space-time block coding (STBC); low-density parity check (LDPC) encoding; and antenna selection (ASEL). The allowed PPDU formats are non-HT format, HT-mixed format, and HT-greenfield format. The PPDUs may be transmitted with 20 MHz or 40 MHz bandwidth.

(*E.g.*, https://standards.ieee.org/standard/802_11n-2009.html).

The operation of HT STAs in the BSS is controlled by the HT Operation element. The structure of this element is defined in Figure 7-95o24.

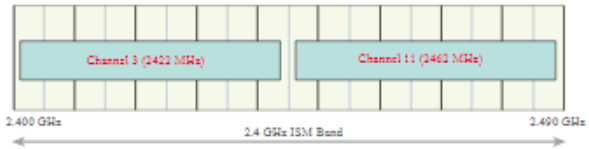


MANN LAW GROUP PLLC
403 Madison Ave. N. Ste.240
Bainbridge Island, WA 98110
TELEPHONE: 206.436-0900 P

Field	Definition	Encoding	Reserved in IBSS ?
Primary Channel	Indicates the channel number of the primary channel. See 11.14.2.	Channel number of the primary channel	N
Secondary Channel Offset	Indicates the offset of the secondary channel relative to the primary channel.	Set to 1 (SCA) if the secondary channel is above the primary channel Set to 3 (SCB) if the secondary channel is below the primary channel Set to 0 (SCN) if no secondary channel is present The value 2 is reserved	N

(*E.g.*, https://standards.ieee.org/standard/802_11n-2009.html).

With the use of IEEE 802.11n, there is the possibility of using signal bandwidths of either 20 MHz or 40 MHz. When 40 MHz bandwidth is used to gain the higher data throughput, this obviously reduces the number of channels that can be used.



IEEE 802.11n 2.4 GHz Wi-Fi 40 MHz channels, frequencies & channel numbers.

(*E.g.*, https://www.electronics-notes.com/articles/connectivity/wifi-ieee-802-11/channels-frequencies-bands-bandwidth.php).

11.14.2 Basic 20/40 MHz BSS functionality

An HT AP declares its channel width capability (20 MHz only or 20/40 MHz) in the Supported Channel Width Set subfield of the HT Capabilities element.

An HT AP shall set the STA Channel Width field to 1 in frames in which it has set the Secondary Channel Offset field to SCA or SCB. An HT AP shall set the STA Channel Width field to 0 in frames in which it has set the Secondary Channel Offset field to SCN.

A non-AP HT STA declares its channel width capability (non-FC HT STA or FC HT STA) in the Supported Channel Width Set subfield in the HT Capabilities element.

(*E.g.*, https://standards.ieee.org/standard/802_11n-2009.html).

MANN LAW GROUP PLLC
403 Madison Ave. N. Ste.240
Bainbridge Island, WA 98110
TELEPHONE: 206.436-0900 P

If the AP or IDO STA starts a 20/40 MHz BSS in the 5 GHz band and the BSS occupies the same two channels as any existing 20/40 MHz BSSs, then the AP or IDO STA shall ensure that the primary channel of the new BSS is identical to the primary channel of the existing 20/40 MHz BSSs and that the secondary channel of the new 20/40 MHz BSS is identical to the secondary channel of the existing 20/40 MHz BSSs, unless the AP discovers that on these two channels are existing 20/40 MHz BSSs with different primary and secondary channels.

(*E.g.*, https://standards.ieee.org/standard/802_11n-2009.html).

17. Upon information and belief, the Accused Instrumentality practices determining of a collision on said channel between signals originating from the first network (*e.g.*, Wi-Fi network of an access point) and from a second network (*e.g.*, another Wi-Fi network of nearby access point, radar, etc.). The Accused Instrumentality determines a utilization of the primary or secondary channel (*i.e.*, collision on a channel) by another Wi-Fi network, radar system, etc.

11.14.2 Basic 20/40 MHz BSS functionality

An HT AP declares its channel width capability (20 MHz only or 20/40 MHz) in the Supported Channel Width Set subfield of the HT Capabilities element.

An HT AP shall set the STA Channel Width field to 1 in frames in which it has set the Secondary Channel Offset field to SCA or SCB. An HT AP shall set the STA Channel Width field to 0 in frames in which it has set the Secondary Channel Offset field to SCN.

A non-AP HT STA declares its channel width capability (non-FC HT STA or FC HT STA) in the Supported Channel Width Set subfield in the HT Capabilities element.

If the AP or IDO STA starts a 20/40 MHz BSS in the 5 GHz band and the BSS occupies the same two channels as any existing 20/40 MHz BSSs, then the AP or IDO STA shall ensure that the primary channel of the new BSS is identical to the primary channel of the existing 20/40 MHz BSSs and that the secondary channel of the new 20/40 MHz BSS is identical to the secondary channel of the existing 20/40 MHz BSSs, unless the AP discovers that on these two channels are existing 20/40 MHz BSSs with different primary and secondary channels.

(*E.g.*, https://standards.ieee.org/standard/802_11n-2009.html).

MANN LAW GROUP PLLC
403 Madison Ave. N. Ste.240
Bainbridge Island, WA 98110
TELEPHONE: 206.436-0900 P

While operating a 20/40 MHz BSS, an IDO STA or an AP may decide to move its BSS, and an AP may decide to switch the BSS to 20 MHz operation either alone or in combination with a channel move. These channel move or BSS width switch operations can occur if, for example, another BSS starts to operate in either or both of the primary or secondary channels, or if radar is detected in either or both of the primary or secondary channels, or for other reasons that are beyond the scope of this standard. Specifically, the AP or IDO STA may move its BSS to a different pair of channels, and the AP may separately, or in combination with the channel switch, change from a 20/40 MHz BSS to a 20 MHz BSS using either the primary channel of the previous channel pair or any other available 20 MHz channel. While operating a 20 MHz BSS, an IDO STA or an AP may decide to move its BSS, and an AP may decide to switch the BSS to a 20/40 MHz BSS, either alone or in combination with a channel move.

(*E.g.*, https://standards.ieee.org/standard/802_11n-2009.html).

Radio regulations may require RLANs operating in the 5 GHz band to implement a mechanism to avoid co-channel operation with radar systems and to ensure uniform utilization of available channels. The DFS service is used to satisfy these regulatory requirements.

The DFS service provides for the following:

- Association of STAs with an AP in a BSS based on the STAs' supported channels.
- Quieting the current channel so it can be tested for the presence of radar with less interference from other STAs.
- Testing channels for radar before using a channel and while operating in a channel.
- Discontinuing operations after detecting radar in the current channel to avoid interference with radar.
- Detecting radar in the current and other channels based on regulatory requirements.
- Requesting and reporting of measurements in the current and other channels.
- Selecting and advertising a new channel to assist the migration of a BSS or IBSS after radar is detected.

(*E.g.*, https://standards.ieee.org/standard/802_11-2007.html).

The requirements described in this subclause apply only when an HT STA is operating in a regulatory class for which the behavior limits set listed in Annex J includes the value 16; i.e., the regulatory class is subject to DFS with 50–100 µs radar pulses.

For an HT STA, the following MIB attributes shall be set to TRUE: dot11RegulatoryClassesImplemented, dot11RegulatoryClassesRequired, and dot11ExtendedChannelSwitchEnabled.

An AP operating a 20/40 MHz BSS, on detecting an OBSS whose primary channel is the AP's secondary channel, switches to 20 MHz BSS operation and may subsequently move to a different channel or pair of channels. An IBSS DFS owner (IDO) STA operating a 20/40 MHz IBSS, on detecting an OBSS whose primary channel is the IDO STA's secondary channel, may choose to move to a different pair of channels.

(*E.g.*, https://standards.ieee.org/standard/802_11n-2009.html).

MANN LAW GROUP PLLC
403 Madison Ave. N. Ste.240
Bainbridge Island, WA 98110
TELEPHONE: 206.436-0900 P

18. Upon information and belief, the Accused Instrumentality practices such that when said collision has been determined, transmitting a change of channel (*e.g.*, another communication channel) request to the first network (*e.g.*, Wi-Fi network of an access point). The Accused Instrumentality sends a request to switch channel on detection of utilization of the primary or secondary channel (*i.e.*, collision on a channel) by another Wi-Fi network, radar system, etc.

11.14.2 Basic 20/40 MHz BSS functionality

An HT AP declares its channel width capability (20 MHz only or 20/40 MHz) in the Supported Channel Width Set subfield of the HT Capabilities element.

An HT AP shall set the STA Channel Width field to 1 in frames in which it has set the Secondary Channel Offset field to SCA or SCB. An HT AP shall set the STA Channel Width field to 0 in frames in which it has set the Secondary Channel Offset field to SCN.

A non-AP HT STA declares its channel width capability (non-FC HT STA or FC HT STA) in the Supported Channel Width Set subfield in the HT Capabilities element.

If the AP or IDO STA starts a 20/40 MHz BSS in the 5 GHz band and the BSS occupies the same two channels as any existing 20/40 MHz BSSs, then the AP or IDO STA shall ensure that the primary channel of the new BSS is identical to the primary channel of the existing 20/40 MHz BSSs and that the secondary channel of the new 20/40 MHz BSS is identical to the secondary channel of the existing 20/40 MHz BSSs, unless the AP discovers that on these two channels are existing 20/40 MHz BSSs with different primary and secondary channels.

While operating a 20/40 MHz BSS, an IDO STA or an AP may decide to move its BSS, and an AP may decide to switch the BSS to 20 MHz operation either alone or in combination with a channel move. These channel move or BSS width switch operations can occur if, for example, another BSS starts to operate in either or both of the primary or secondary channels, or if radar is detected in either or both of the primary or secondary channels, or for other reasons that are beyond the scope of this standard. Specifically, the AP or IDO STA may move its BSS to a different pair of channels, and the AP may separately, or in combination with the channel switch, change from a 20/40 MHz BSS to a 20 MHz BSS using either the primary channel of the previous channel pair or any other available 20 MHz channel. While operating a 20 MHz BSS, an IDO STA or an AP may decide to move its BSS, and an AP may decide to switch the BSS to a 20/40 MHz BSS, either alone or in combination with a channel move.

(*E.g.*, https://standards.ieee.org/standard/802_11n-2009.html).

MANN LAW GROUP PLLC
403 Madison Ave. N. Ste.240
Bainbridge Island, WA 98110
TELEPHONE: 206.436-0900 P

Radio regulations may require RLANs operating in the 5 GHz band to implement a mechanism to avoid co-channel operation with radar systems and to ensure uniform utilization of available channels. The DFS service is used to satisfy these regulatory requirements.

The DFS service provides for the following:

- Association of STAs with an AP in a BSS based on the STAs' supported channels.
- Quieting the current channel so it can be tested for the presence of radar with less interference from other STAs.
- Testing channels for radar before using a channel and while operating in a channel.
- Discontinuing operations after detecting radar in the current channel to avoid interference with radar.
- Detecting radar in the current and other channels based on regulatory requirements.
- Requesting and reporting of measurements in the current and other channels.
- Selecting and advertising a new channel to assist the migration of a BSS or IBSS after radar is detected.

(*E.g.*, https://standards.ieee.org/standard/802_11-2007.html).

The requirements described in this subclause apply only when an HT STA is operating in a regulatory class for which the behavior limits set listed in Annex J includes the value 16; i.e., the regulatory class is subject to DFS with 50–100 µs radar pulses.

For an HT STA, the following MIB attributes shall be set to TRUE: dot11RegulatoryClassesImplemented, dot11RegulatoryClassesRequired, and dot11ExtendedChannelSwitchEnabled.

An AP operating a 20/40 MHz BSS, on detecting an OBSS whose primary channel is the AP's secondary channel, switches to 20 MHz BSS operation and may subsequently move to a different channel or pair of channels. An IBSS DFS owner (IDO) STA operating a 20/40 MHz IBSS, on detecting an OBSS whose primary channel is the IDO STA's secondary channel, may choose to move to a different pair of channels.

(*E.g.*, https://standards.ieee.org/standard/802_11n-2009.html).

MANN LAW GROUP PLLC
403 Madison Ave. N. Ste.240
Bainbridge Island, WA 98110
TELEPHONE: 206.436-0900 P

10.3.15.1 MLME-CHANNELSWITCH.request

10.3.15.1.2 Semantics of the service primitive

Change the parameter list in 10.3.15.1.2 follows:

The primitive parameters are as follows:

MLME-CHANNELSWITCH.request(
Mode,
Channel Number,
Secondary Channel Offset,
Channel Switch Count,
VendorSpecificInfo
)

Insert the following row before the Channel Switch Count row in the untitled table defining the primitive parameters in 10.3.15.1.2:

Name	Type	Valid range	Description
Secondary Channel Offset	Integer	As in Table 7-27a	Specifies the position of secondary channel in relation to the primary channel. The parameter shall be present if the MIB attribute dot11FortyMHzOperationImplemented is TRUE; otherwise, the parameter shall not be present.

(*E.g.*, https://standards.ieee.org/standard/802_11n-2009.html).

19. Upon information and belief, the Accused Instrumentality practices associating the apparatus with a base station (*e.g.*, an access point) of the first network (*e.g.*, Wi-Fi network of an access point), following non-detection of collision.

MANN LAW GROUP PLLC
403 Madison Ave. N. Ste.240
Bainbridge Island, WA 98110
TELEPHONE: 206.436-0900 P

11.14.2 Basic 20/40 MHz BSS functionality

An HT AP declares its channel width capability (20 MHz only or 20/40 MHz) in the Supported Channel Width Set subfield of the HT Capabilities element.

An HT AP shall set the STA Channel Width field to 1 in frames in which it has set the Secondary Channel Offset field to SCA or SCB. An HT AP shall set the STA Channel Width field to 0 in frames in which it has set the Secondary Channel Offset field to SCN.

A non-AP HT STA declares its channel width capability (non-FC HT STA or FC HT STA) in the Supported Channel Width Set subfield in the HT Capabilities element.

If the AP or IDO STA starts a 20/40 MHz BSS in the 5 GHz band and the BSS occupies the same two channels as any existing 20/40 MHz BSSs, then the AP or IDO STA shall ensure that the primary channel of the new BSS is identical to the primary channel of the existing 20/40 MHz BSSs and that the secondary channel of the new 20/40 MHz BSS is identical to the secondary channel of the existing 20/40 MHz BSSs, unless the AP discovers that on these two channels are existing 20/40 MHz BSSs with different primary and secondary channels.

While operating a 20/40 MHz BSS, an IDO STA or an AP may decide to move its BSS, and an AP may decide to switch the BSS to 20 MHz operation either alone or in combination with a channel move. These channel move or BSS width switch operations can occur if, for example, another BSS starts to operate in either or both of the primary or secondary channels, or if radar is detected in either or both of the primary or secondary channels, or for other reasons that are beyond the scope of this standard. Specifically, the AP or IDO STA may move its BSS to a different pair of channels, and the AP may separately, or in combination with the channel switch, change from a 20/40 MHz BSS to a 20 MHz BSS using either the primary channel of the previous channel pair or any other available 20 MHz channel. While operating a 20 MHz BSS, an IDO STA or an AP may decide to move its BSS, and an AP may decide to switch the BSS to a 20/40 MHz BSS, either alone or in combination with a channel move.

(*E.g.*, https://standards.ieee.org/standard/802_11n-2009.html).

MANN LAW GROUP PLLC
403 Madison Ave. N. Ste.240
Bainbridge Island, WA 98110
TELEPHONE: 206.436-0900 P

> Radio regulations may require RLANs operating in the 5 GHz band to implement a mechanism to avoid co-channel operation with radar systems and to ensure uniform utilization of available channels. The DFS service is used to satisfy these regulatory requirements.
>
> The DFS service provides for the following:
>
> — Association of STAs with an AP in a BSS based on the STAs' supported channels.
> — Quieting the current channel so it can be tested for the presence of radar with less interference from other STAs.
> — Testing channels for radar before using a channel and while operating in a channel.
> — Discontinuing operations after detecting radar in the current channel to avoid interference with radar.
> — Detecting radar in the current and other channels based on regulatory requirements.
> — Requesting and reporting of measurements in the current and other channels.
> — Selecting and advertising a new channel to assist the migration of a BSS or IBSS after radar is detected.

(*E.g.*, https://standards.ieee.org/standard/802_11-2007.html).

> The requirements described in this subclause apply only when an HT STA is operating in a regulatory class for which the behavior limits set listed in Annex J includes the value 16; i.e., the regulatory class is subject to DFS with 50–100 µs radar pulses.
>
> For an HT STA, the following MIB attributes shall be set to TRUE: dot11RegulatoryClassesImplemented, dot11RegulatoryClassesRequired, and dot11ExtendedChannelSwitchEnabled.
>
> An AP operating a 20/40 MHz BSS, on detecting an OBSS whose primary channel is the AP's secondary channel, switches to 20 MHz BSS operation and may subsequently move to a different channel or pair of channels. An IBSS DFS owner (IDO) STA operating a 20/40 MHz IBSS, on detecting an OBSS whose primary channel is the IDO STA's secondary channel, may choose to move to a different pair of channels.

(*E.g.*, https://standards.ieee.org/standard/802_11n-2009.html).

20. Plaintiff has been damaged as a result of Defendant's infringing conduct. Defendant is thus liable to Plaintiff for damages in an amount that adequately compensates Plaintiff for such Defendant's infringement of the '291 Patent, *i.e.*, in an amount that by law cannot be less than would constitute a reasonable royalty for the use of the patented technology, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

21. On information and belief, Defendant has had at least constructive notice of the '291 Patent, by operation of law and marking requirements have been complied with.

MANN LAW GROUP PLLC
403 Madison Ave. N. Ste.240
Bainbridge Island, WA 98110
TELEPHONE: 206.436-0900 P

JURY DEMAND

Plaintiff, under Rule 38 of the Federal Rules of Civil Procedure, requests a trial by jury of any issues so triable by right.

V. PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests that the Court find in its favor and against Defendant, and that the Court grant Plaintiff the following relief:

a. Judgment that one or more claims of United States Patent No. 7,177,291 have been infringed, either literally and/or under the doctrine of equivalents, by Defendant;

b. Judgment that Defendant account for and pay to Plaintiff all damages to and costs incurred by Plaintiff because of Defendant's infringing activities and other conduct complained of herein;

c. That Plaintiff be granted pre-judgment and post-judgment interest on the damages caused by Defendant's infringing activities and other conduct complained of herein;

d. That Plaintiff be granted such other and further relief as the Court may deem just and proper under the circumstances.

MANN LAW GROUP PLLC
403 Madison Ave. N. Ste.240
Bainbridge Island, WA 98110
TELEPHONE: 206.436-0900 P

September 23, 2022

By *s/ Philip P. Mann*

Philip P. Mann, WSBA No: 28860
MANN LAW GROUP PLLC
403 Madison Ave. N. Ste. 240
Bainbridge Island, Washington 98110
(206) 436-0900
phil@mannlawgroup.com

David R. Bennett
(Application for Admission *Pro Hac Vice* to be filed)
Direction IP Law
P.O. Box 14184
Chicago, IL 60614-0184
(312) 291-1667
dbennett@directionip.com

Attorneys for Plaintiff Triumph IP LLC