

Required fields are shown with yellow backgrounds and asterisks.

Filing by NYSE Chicago, Inc.
Pursuant to Rule 19b-4 under the Securities Exchange Act of 1934

Initial *	Amendment *	Withdrawal	Section 19(b)(2) *	Section 19(b)(3)(A) *	Section 19(b)(3)(B) *
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			Rule		
Pilot	Extension of Time Period for Commission Action *	Date Expires *	<input type="checkbox"/> 19b-4(f)(1)	<input type="checkbox"/> 19b-4(f)(4)	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/> 19b-4(f)(2)	<input type="checkbox"/> 19b-4(f)(5)	
			<input type="checkbox"/> 19b-4(f)(3)	<input type="checkbox"/> 19b-4(f)(6)	

Notice of proposed change pursuant to the Payment, Clearing, and Settlement Act of 2010	Security-Based Swap Submission pursuant to the Securities Exchange Act of 1934
Section 806(e)(1) *	Section 806(e)(2) *
<input type="checkbox"/>	<input type="checkbox"/>
	Section 3C(b)(2) *
	<input type="checkbox"/>

Exhibit 2 Sent As Paper Document	Exhibit 3 Sent As Paper Document
<input type="checkbox"/>	<input type="checkbox"/>

Description

Provide a brief description of the action (limit 250 characters, required when Initial is checked *).

Contact Information

Provide the name, telephone number, and e-mail address of the person on the staff of the self-regulatory organization prepared to respond to questions and comments on the action.

First Name * Last Name *

Title *

E-mail *

Telephone * Fax

Signature

Pursuant to the requirements of the Securities Exchange Act of 1934,

has duly caused this filing to be signed on its behalf by the undersigned thereunto duly authorized.

(Title *)

Date Senior Counsel

By

(Name *)

NOTE: Clicking the button at right will digitally sign and lock this form. A digital signature is as legally binding as a physical signature, and once signed, this form cannot be changed.

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

For complete Form 19b-4 instructions please refer to the EFFS website.

Form 19b-4 Information *

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The self-regulatory organization must provide all required information, presented in a clear and comprehensible manner, to enable the public to provide meaningful comment on the proposal and for the Commission to determine whether the proposal is consistent with the Act and applicable rules and regulations under the Act.

Exhibit 1 - Notice of Proposed Rule Change *

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The Notice section of this Form 19b-4 must comply with the guidelines for publication in the Federal Register as well as any requirements for electronic filing as published by the Commission (if applicable). The Office of the Federal Register (OFR) offers guidance on Federal Register publication requirements in the Federal Register Document Drafting Handbook, October 1998 Revision. For example, all references to the federal securities laws must include the corresponding cite to the United States Code in a footnote. All references to SEC rules must include the corresponding cite to the Code of Federal Regulations in a footnote. All references to Securities Exchange Act Releases must include the release number, release date, Federal Register cite, Federal Register date, and corresponding file number (e.g., SR-[SRO]-xx-xx). A material failure to comply with these guidelines will result in the proposed rule change being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3)

Exhibit 1A- Notice of Proposed Rule Change, Security-Based Swap Submission, or Advance Notice by Clearing Agencies *

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The Notice section of this Form 19b-4 must comply with the guidelines for publication in the Federal Register as well as any requirements for electronic filing as published by the Commission (if applicable). The Office of the Federal Register (OFR) offers guidance on Federal Register publication requirements in the Federal Register Document Drafting Handbook, October 1998 Revision. For example, all references to the federal securities laws must include the corresponding cite to the United States Code in a footnote. All references to SEC rules must include the corresponding cite to the Code of Federal Regulations in a footnote. All references to Securities Exchange Act Releases must include the release number, release date, Federal Register cite, Federal Register date, and corresponding file number (e.g., SR-[SRO]-xx-xx). A material failure to comply with these guidelines will result in the proposed rule change, security-based swap submission, or advance notice being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3)

Exhibit 2 - Notices, Written Comments, Transcripts, Other Communications

Add Remove View

Exhibit Sent As Paper Document

Copies of notices, written comments, transcripts, other communications. If such documents cannot be filed electronically in accordance with Instruction F, they shall be filed in accordance with Instruction G.

Exhibit 3 - Form, Report, or Questionnaire

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Exhibit Sent As Paper Document

Copies of any form, report, or questionnaire that the self-regulatory organization proposes to use to help implement or operate the proposed rule change, or that is referred to by the proposed rule change.

Exhibit 4 - Marked Copies

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The full text shall be marked, in any convenient manner, to indicate additions to and deletions from the immediately preceding filing. The purpose of Exhibit 4 is to permit the staff to identify immediately the changes made from the text of the rule with which it has been working.

Exhibit 5 - Proposed Rule Text

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The self-regulatory organization may choose to attach as Exhibit 5 proposed changes to rule text in place of providing it in Item I and which may otherwise be more easily readable if provided separately from Form 19b-4. Exhibit 5 shall be considered part of the proposed rule change.

Partial Amendment

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If the self-regulatory organization is amending only part of the text of a lengthy proposed rule change, it may, with the Commission's permission, file only those portions of the text of the proposed rule change in which changes are being made if the filing (i.e. partial amendment) is clearly understandable on its face. Such partial amendment shall be clearly identified and marked to show deletions and additions.

SR-NYSECHX-2020-02, Partial Amendment No. 3

NYSE Chicago, Inc. (“NYSE Chicago” or the “Exchange”) hereby submits this Partial Amendment No. 3 to the above-referenced filing (“Filing”), in connection with the proposed rule change to establish a schedule of Wireless Connectivity Fees and Charges (the “Wireless Fee Schedule”) with wireless connections between the Mahwah, New Jersey data center and other data centers. With this Partial Amendment No. 3, the Exchange proposes a new rule to place restrictions on the use of a pole or other structure on the grounds of the Mahwah, New Jersey data center that is used for such wireless connections.

This Partial Amendment No. 3 supersedes Partial Amendment No. 2, which has been withdrawn.

The Exchange proposes the following amendments to the Filing:

1. The Exchange proposes to amend the first paragraph in Item 1(a) on page 3 of the Filing:

The Exchange proposes to amend the first paragraph of Item 1(a) on page 3 of the Filing to add “(a)” before “establish” and add new text at the end of the paragraph to describe the proposed rule change, as follows (new text underlined):

Pursuant to the provisions of Section 19(b)(1) of the Securities Exchange Act of 1934 (the “Act”)¹ and Rule 19b-4 thereunder,² NYSE Chicago, Inc. (“NYSE Chicago” or the “Exchange”) proposes to (a) establish a schedule of Wireless Connectivity Fees and Charges (the “Wireless Fee Schedule”) with wireless connections between the Mahwah, New Jersey data center and other data centers, and (b) add a new rule to place restrictions on the use of a pole or other structure on the grounds of the Mahwah, New Jersey data center that is used for such wireless connections.

2. The Exchange proposes to amend the carryover paragraph on pages 3 and 4 of the Filing (second full paragraph on page 24 of the Exhibit 1):

The Exchange proposes to add a sentence at the end of the carryover paragraph on pages 3 and 4 of the Filing (second full paragraph on page 24 of the Exhibit 1) to describe the proposed rule change, as follows (new text underlined):

The Exchange proposes to establish the Wireless Fee Schedule with wireless connections between the Mahwah, New Jersey data center and three data centers that are owned and operated by third parties unaffiliated with the Exchange: (1) Carteret, New Jersey, (2) Secaucus, New Jersey, and (3) Markham, Canada (collectively, the “Third Party Data Centers”). Market participants that purchase such a wireless connection (a “Wireless Connection”) are charged an initial and monthly fee. In addition, the Exchange proposes to include a General Note to the Wireless Fee Schedule. The Exchange proposes to add a new rule to place

restrictions on the use of a pole or other structure on the grounds of the Mahwah, New Jersey data center that is used for the Wireless Connections.

3. The Exchange proposes to add a new section titled “Proposed New Rule” and accompanying footnotes after the second full paragraph on page 14 of the Filing (first full paragraph on page 40 of the Exhibit 1):

The Exchange proposes a new rule to place restrictions on the use of a pole on the grounds of the Mahwah, New Jersey data center that is used for wireless connectivity services. Accordingly, the Exchange proposes to add a new section titled “Proposed New Rule” with accompanying footnotes (subsequent footnotes would be renumbered in a conforming change) after the second full paragraph on page 14 of the Filing (first full paragraph on page 40 of the Exhibit 1), after the end of the section titled “Proposed General Note,” as follows (all text is new):

Proposed New Rule

Since 2016, IDS has had the use of a pole on the grounds of the Mahwah data center.^{25/26} The data center pole is part of the network utilized for the Wireless Connections to the Carteret and Secaucus Third Party Data Centers.^{26/27} At the data center pole, the wireless connection to the Third Party Data Centers converts to a fiber connection, and the fiber connection travels from the data center pole into the Mahwah data center.^{27/28} The equipment on the data center pole belongs to IDS and Anova Technologies, LLC (“Anova”), the non-ICE entity that owns the wireless network used for the Wireless Connections to Secaucus and Carteret.^{28/29}

Other third parties that offer wireless services utilize commercial poles located outside the grounds of the Mahwah, New Jersey data center for their wireless networks. A third party’s wireless connections to the Third Party Data Center convert to fiber connections at the commercial pole, and the fiber connects the commercial pole to the Mahwah data center.

Several such third parties have objected to the use of the data center pole for the Wireless Connections. They argue that IDS has an advantage over its competitors because third parties are not allowed access to the data center pole,^{29/30} and the data center pole is closer to the Mahwah data center than any commercial pole.^{30/31} One commentator argued that the data center pole should be retired.^{31/32} The same commentator raised the additional concern that the Wireless Connections may benefit from “less obvious and more discreet types of latency advantages” due to infrastructure inside the Mahwah data center, noting that “some connections may have a longer fiber route than others within a data center or may have to go through various equipment or meet me rooms that an affiliate or preferred provider of an exchange do not.”^{32/33}

The Exchange is proposing a new Rule 3.13 (Data Center Pole Restrictions—Connectivity to Co-Location Space). The proposed rule would include the

following definitions:

- “Closest Commercial Pole” would mean the Commercial Pole that has the shortest fiber path between (a) the Patch Panel Point and (b) the base of the Commercial Pole.
- “Commercial Pole” would mean a pole or other structure (a) on which one or more third parties locate wireless equipment used to offer wireless connectivity to other third parties, and (b) from which a fiber connection extends between the Data Center and third party equipment located on the pole or other structure.
- “Data Center” would mean the Mahwah, New Jersey data center where the Exchange’s matching engine is located, or its successor.
- “Data Center Pole” would mean a pole or other structure that (a) holds wireless equipment, and (b) is located within the grounds of the Data Center.^{33/34}
- “Patch Panel Point” would mean the patch panel where fiber connections for wireless services connect to the network row in the space used for co-location in the Data Center.
- “Third Party Data Center” would mean a service access point from which wireless connections to the Data Center using a Data Center Pole are made available.

The proposed rule would require that:

1. With respect to each Third Party Data Center, the length of the fiber path between the base of any Data Center Pole and the Patch Panel Point shall be no less than the sum of
 - a. the length of the fiber path between the base of the Closest Commercial Pole and the Patch Panel Point, plus
 - b. the difference in length, if any, between (i) the geodesic distance between the Closest Commercial Pole and the Third Party Data Center and (ii) the geodesic distance between the Data Center Pole and the Third Party Data Center.
2. The length of the fiber from the Patch Panel Point to each customer cabinet in the space used for co-location in the Data Center is the same.

In a conforming change, the Exchange proposes to add a new Rule 3.12, marked “Reserved.” The addition would allow the numbering of the proposed Rule 3.13 to be consistent with changes proposed by the Affiliate SROs to their rules.^{34/35}

The Exchange notes that the rule would apply to the fiber path used for Wireless Services and also for the previously filed wireless services that allow co-located users to receive market data feeds from third party markets through a wireless connection.^{35/36}

The Exchange proposes to use the Patch Panel Point as the end point because every provider of wireless connectivity to co-location customers, including IDS and each of its competitors, is connected to the Patch Panel Point, and the length of the fiber path from the Patch Panel Point to each customer cabinet in the space used for co-location in the data center (“Customer Cabinet”) is the same. The proposal would establish in a rule an already existing fact. By so doing, the proposed rule would take distances within the Mahwah data center into account.

As described in 1(a), the Exchange proposes that the rule compare the lengths of the fiber paths from the Data Center Pole and Closest Commercial Pole, not the straight-line distance between points. As the August McKay Letter noted, “[i]f the Exchanges equalized connections based on a geodesic line measurement above ground, the Data Center Pole connection would maintain a meaningful advantage in its fiber length relative to the closest commercial pole.”^{36/37}

As described in 1(b), the proposed rule does use geodesic distances, sometimes referred to as “over-the-air” distances, in comparing the distances between the two poles and the relevant Third Party Data Center. This approach is consistent with comments received.^{37/38} Geodesic measurements use above ground line measurements. No known commercial provider, including ICE Affiliates, has a network that follows the geodesic route. The routes they do follow are both changeable and not publicly available. Given that, the Exchange believes that the geodesic distances take into account the September McKay Letter’s concern that “irrespective of the route taken from Nasdaq Inc.’s (“Nasdaq”) data center in Carteret to the Mahwah Data Center, the minimum distance that must be traveled is shorter via the Data Center Pole than via the closest commercial pole.”^{38/39}

The proposed rule does not incorporate all of the suggestions made. Most notably, the August McKay Letter suggests that the proposed rule address what would happen if the Exchange or an ICE Affiliate used a wireless pole on private property off the grounds of the Mahwah data center.^{39/40} The Exchange does not believe that addressing the potential use of any hypothetical pole outside the data center grounds would further the goals of the proposed rule. It is designed to address any advantage that the Wireless Connections have by virtue of a Data Center Pole, because, other than Anova services provided under IDS’ name, third parties have no access to such pole. By contrast, the Exchange and IDS would have no special access or exclusive rights with respect to any commercial pole off the grounds of the Mahwah data center. They would compete for the use of such grounds or any pole built on them, just like IDS does for the other poles in its wireless network.

- 25/26 See Securities Exchange Act Release No. 76748 (December 23, 2015), 80 FR 81609 (December 30, 2015) (SR-NYSE-2015-52) (order approving proposed rule change to the co-location services offered by the NYSE (the offering of a wireless connection to allow users to receive market data feeds from third party markets) and to reflect changes to the NYSE’s price list related to these services) (“Wireless Third Party Connectivity Services Filing”).
- 26/27 The Wireless Connections with Markham, Canada do not use equipment on the data center pole.
- 27/28 The wireless network similarly converts to a fiber connection for its connection into the Third Party Data Centers.
- 28/29 Equipment for services Anova offers under its own name is not allowed on the data center pole.
- 29/30 IDS does not sell rights to other third parties to operate wireless equipment on the data center pole due to space limitations, security concerns, and the interference that would arise between equipment placed too closely together. Commentators have contested these reasons. See, e.g., letter from Jim Considine, Chief Financial Officer, McKay Brothers, LLC (“McKay Brothers”) to Ms. Vanessa Countryman, Secretary, Securities and Exchange Commission (“Commission”), dated August 28, 2020 (“August McKay Letter”), at 8, and letter from Jim Considine, Chief Financial Officer, McKay Brothers, to Ms. Vanessa Countryman, Secretary, Commission, dated September 21, 2020 (“September McKay Letter”), at 2. The Exchange previously addressed such assertions, and so does not repeat its response here. See letter from Elizabeth K. King, Chief Regulatory Officer, ICE, General Counsel and Corporate Secretary, NYSE, to Ms. Vanessa Countryman, Secretary, Commission, dated May 8, 2020 (“May Letter”), at 7.
- 30/31 See letter from Gregory Babyak, Global Head of Regulatory Affairs, Bloomberg L.P., to Ms. Vanessa Countryman, Secretary, Commission, dated June 12, 2020; letter from Stephen John Berger, Managing Director, Global Head of Government and Regulatory Policy, Citadel Securities, to Ms. Vanessa Countryman, Secretary, Commission, dated June 12, 2020; letter from Jim Considine, Chief Financial Officer, McKay Brothers, to Ms. Vanessa Countryman, Secretary, Commission, dated June 12, 2020 (“June McKay Letter”); August McKay Letter, supra note 29/30; letter from Thomas M. Merritt, Deputy General Counsel, Virtu Financial, Inc. to Ms. Vanessa Countryman, Secretary, Commission, dated March 10, 2020; and letter from Douglas A. Cifu, Chief Executive Officer, Virtu Financial, Inc. to Ms. Vanessa Countryman, Secretary, Commission, dated August 28, 2020 (“August Virtu Letter”).
- 31/32 August McKay Letter, supra note 29/30, at 2. The August McKay Letter proposed two methods to address its concerns: terminating the use of the data center pole or building a new pole with capacity for all potential users. Id. The

- Exchange believes that, although it takes a different approach, the third alternative proscribed in the proposed rule would squarely address the focus of the objections. In so doing, it would not only address present differences, but also “dampen exchange incentives to create structural advantages in the future.” Id., at 3. The Exchange notes that the proposed rule incorporates various comments made in the August McKay Letter. See id., at 4-8.
- 32/33 June McKay Letter, supra note 30/31, at 9, and letter from Jim Considine, Chief Financial Officer, McKay Brothers, to Ms. Vanessa Countryman, Secretary, Commission, dated September 21, 2020 (“September McKay Letter”).
- 33/34 The Exchange notes that its proposed definition differs from that in the August McKay Letter. See August McKay Letter, supra note 29/30, at 4. The Exchange believes that the proposed definition resolves the issue raised therein because, by removing any reference to how the structure is used, the definition removes any possibility that the Exchange could evade the requirements of the proposed rule simply by allowing a third party to utilize the structure.
- 34/35 See Securities Exchange Act Release Nos. 88168 (February 11, 2020), 85 FR 8938, (February 18, 2020) (SR-NYSE-2020-05); 88169 (February 11, 2020), 85 FR 8946 February 18, 2020) (SR-NYSEAMER-2020-05); 88170 (February 11, 2020), 85 FR 8956 (February 18, 2020) (SR-NYSEArca-2020-08); and 88171 (February 11, 2020), 85 FR 8930 (February 18, 2020) (SR-NYSESTAT-2020-03) (notice of filing of proposed rule change to establish a Schedule of Wireless Connectivity Fees and Charges with wireless connections).
- 35/36 See Wireless Third Party Connectivity Services Filing, supra note 25/26.
- 36/37 August McKay Letter, supra note 29/30, at 5.
- 37/38 See, e.g., id., at 6-7.
- 38/39 September McKay Letter, supra note 32/32, at 4.
- 39/40 August McKay Letter, supra note 29/30, at 7-8.

4. The Exchange proposes to add new text after the carryover paragraph on pages 15 and 16 of the Filing (first full paragraph on page 42 of the Exhibit 1):

The Exchange proposes to amend the Filing to include additional analysis of the competitive environment for wireless connections. Accordingly, the Exchange proposes to add a paragraph and accompanying footnote (subsequent footnotes would be renumbered in a conforming change) after the carryover paragraph on pages 15 and 16 of the Filing (first full paragraph on page 42 of the Exhibit 1) as follows (all text new):

The Exchange believes that its competitors’ wireless connections provide connectivity at the same or similar speed as the Wireless Connections, and at the same or similar cost. Indeed, the June McKay Letter acknowledges that McKay

Brothers has the fastest wireless network.^{41/42}

^{41/42} June McKay Letter, supra note 30/31, at 4.

5. The Exchange proposes to amend the Statutory Basis section of the Filing after the third full paragraph on page 18 of the Filing (second full paragraph on page 46 of the Exhibit 1):

The Exchange proposes to include information in the Filing regarding why it believes the proposed new rule is reasonable. The Exchange proposes to amend the Statutory Basis section of the Filing to add new paragraphs and accompanying footnotes (subsequent footnotes would be renumbered in a conforming change) after the third full paragraph on page 18 of the Filing (second full paragraph on page 46 of the Exhibit 1), at the end of the section titled “The Proposed Change is Reasonable,” as follows (all text is new):

The Exchange believes that the proposed new Rule 3.13 would be reasonable as, pursuant to the rule, the networks for the Wireless Connections, and future wireless connections that use a Data Center Pole, would “operat[e] in the same manner as competitors do today without a latency subsidy or other advantage provided by the Exchanges....”^{46/47} Accordingly, the proposed new rule would promote just and equitable principles of trade and, in general, protect investors and the public interest by ensuring that the subscribers to services using the IDS wireless network do not benefit from any physical proximity “on the segment [of the network] closest to the Exchanges’ data center that no competitor can replicate.”^{47/48}

The proposed new rule would not apply differently to distinct types or sizes of market participants. Under the proposed rule, the Exchange would be required to ensure that the length of the fiber path between the base of the Data Center Pole and the Patch Panel Point would be no less than the sum of (a) the length of the fiber path between the base of the Closest Commercial Pole and the Patch Panel Point, plus (b) the difference in length, if any, between (i) the geodesic distance between the Closest Commercial Pole and the Third Party Data Center and (ii) the geodesic distance between the Data Center Pole and the Third Party Data Center.

The Exchange believes that the proposed definition of “Commercial Pole” is reasonable and would promote just and equitable principles of trade because it would encompass any pole or other structure on which a third party locates its wireless equipment in order to offer wireless connectivity to customers, so long as a fiber connection extended between the Data Center and third party equipment located on the structure. The Exchange believes that such third parties are the direct competitors for the Wireless Connections, as they also offer wireless connections to customers. If a third party used a pole or other structure for a proprietary wireless network and that pole did not have one or more third parties’ wireless equipment used to offer wireless connectivity to other third parties, that structure would not fall within the scope of the definition of Commercial Pole. The Exchange believes that it is reasonable for the definition to include other

structures, not just poles, as structures besides poles might be used to provide or support wireless equipment.^{48/49}

The Exchange believes that the proposed definition of “Data Center” is reasonable and would promote just and equitable principles of trade because it would capture any data center in which the Exchange locates its matching engine. Similarly, the Exchange believes that the proposed definition of “Third Party Data Center” is reasonable and would promote just and equitable principles of trade because it would capture any data center from which wireless connections are made to the Data Center using a Data Center Pole.

The Exchange believes that the proposed definition of “Data Center Pole” is reasonable and would promote just and equitable principles of trade because it would encompass not just the current pole, but also any additional or successor pole or other structure that held wireless equipment and was on the grounds of the Data Center. For example, the equipment on the present data center pole belongs to IDS and Anova. Such pole would meet the definition of a “Data Center Pole,” even if a different third party contracted to utilize it, so long as the pole held wireless equipment and was on the grounds of the Data Center. The Exchange believes that it is reasonable for the definition to include other structures, not just poles, as structures besides poles might be used to provide or support wireless equipment.

The Exchange believes that it is reasonable to use the Patch Panel Point as an end point because every provider of wireless connectivity to co-location customers, including IDS and each of its competitors, is connected to the Patch Panel Point, and the length of the fiber path from the Patch Panel Point to each Customer Cabinet is the same. The proposal would establish in a rule an already existing fact. By so doing, the proposed rule would take distances within the Mahwah data center into account.

The latency of the Wireless Connections would increase as a result of the new rule. The Exchange is committed to the principal of having no measurable latency differential due to its use of a Data Center Pole. That goal is easier stated than met, however, because in order to compare two latencies, both have to be available. As noted in the May Letter,^{49/50} IDS’s commercial competitors and entities with proprietary wireless networks are not obligated to make their latency public. They are also not obligated to share latency figures with the Exchange or any of the ICE Affiliates or make it possible for the Exchange or an ICE Affiliate to measure the latency themselves. As a result, the Exchange cannot ensure that it would have access to the information required to measure whether there is any latency differential. In addition, no known commercial provider, including ICE Affiliates, has a network that follows the geodesic route, and the routes they do follow are both changeable and not publicly available. As a result, the Exchange cannot ensure that it would have access to the information required to measure what differences exist in the path followed between the Closest Commercial Pole and any Third Party Data Center.

Given the information available, the Exchange believes that the proposed rule is a reasonable approach to address the distance differential between a Data Center Pole and the Closest Commercial Pole. The proposed new rule is designed to provide that the customers using the Wireless Connections would not benefit from wireless equipment being on an ICE-controlled Data Center Pole that is closer to the Patch Panel Point than the Closest Commercial Pole. It is designed to reasonably ensure that data traversing the Wireless Connections via the Data Center Pole would travel the same fiber distance to the Patch Panel Point as data sent by third party wireless services via the Closest Commercial Pole, and to take the difference in the two poles' locations into account by adding the difference in length, if any, of the geodesic distance between each of them and the relevant Third Party Data Center. Because each Third Party Data Center may be in a different direction from the Data Center, the Exchange believes it is reasonable that the proposed rule would be in respect to each Third Party Data Center.

The Exchange will monitor its compliance with the proposed rule. Further, if the rule is approved, once the required changes are implemented, the Exchange commits to have the latency of the fiber route between the Data Center Pole and Patch Panel Point measured. If a third party that uses the Closest Commercial Pole allows the Exchange or its ICE Affiliate to measure the latency of its fiber route between the Closest Commercial Pole and the Patch Panel Point, the Exchange undertakes to ensure that its latency is no less than that third party's latency, so long as (a) the third party equipment is the same or substantially similar to the equipment that the Exchange or its ICE Affiliate uses, and (b) the third party allows the Exchange or its ICE Affiliate to make latency measurements at least annually.^{50/51}

46/47 June McKay Letter, supra note 30/31, at 7.

47/48 Id., at note 33.

48/49 See August McKay Letter, supra note 29/30, at 4.

49/50 May Letter, supra note 29/30, at 17.

50/51 The equipment that a wireless provider uses can be material in determining its latency. See id., at 6. Accordingly, to ensure that the only variable in the comparison is the length of the fiber, the equipment used by both parties would need to be the same or substantially similar. The Exchange would be able to assess whether equipment is substantially similar by reviewing the technical specifications for the equipment provided by the manufacturer. The Exchange also proposes that the measurement be reviewed at least annually, so that the Exchange or its ICE Affiliate may adjust for changes in the third party's latency. If the third party ceased allowing the Exchange or its ICE Affiliate to measure its latency, the Exchange would not be able to do a comparison, and so could cease compensating for any difference in latency based on that comparison one year

after the last measurement. The Exchange would continue to comply with Rule 3.13.

6. The Exchange proposes to amend the Statutory Basis section of the Filing after the second full paragraph on page 20 of the Filing (second full paragraph on page 49 of the Exhibit 1):

The Exchange proposes to include information in the Filing regarding why it believes the proposed new rule is not unfairly discriminatory. The Exchange proposes to amend the Statutory Basis section of the Filing to add new paragraphs and accompanying footnotes (subsequent footnotes would be renumbered in a conforming change) after the second full paragraph on page 20 of the Filing (second full paragraph on page 49 of the Exhibit 1), immediately prior to the last paragraph of the section titled "The Proposed Change is Not Unfairly Discriminatory," as follows (all text is new):

The Exchange believes that the proposed new Rule 3.13 would not be unfairly discriminatory, as pursuant to the rule, the networks for the Wireless Connections, and future wireless connections that use a Data Center Pole, would "operat[e] in the same manner as competitors do today without a latency subsidy or other advantage provided by the Exchanges...."^{51/52} Accordingly, the proposed new rule would ensure that subscribers to services using the IDS wireless network do not benefit from physical proximity "on the segment [of the network] closest to the Exchanges' data center that no competitor can replicate."^{52/53} The proposed rule would apply to the fiber path used for Wireless Services and also for the previously filed wireless services that allow co-located users to receive market data feeds from third party markets through a wireless connection.

The proposed new rule would not apply differently to distinct types or sizes of market participants. Under the proposed rule, the Exchange would be required to ensure that the length of the fiber path between the base of the Data Center Pole and the Patch Panel Point would be no less than the sum of (a) the length of the fiber path between the base of the Closest Commercial Pole and the Patch Panel Point, plus (b) the difference in length, if any, between (i) the geodesic distance between the Closest Commercial Pole and the Third Party Data Center and (ii) the geodesic distance between the Data Center Pole and the Third Party Data Center.

The Exchange believes that the proposed definition of "Commercial Pole" would not be unfairly discriminatory because it would encompass any pole or other structure on which a third party locates its wireless equipment in order to offer wireless connectivity to customers, so long as a fiber connection extended between the Data Center and third party equipment located on the structure. The Exchange believes that such third parties are the direct competitors for the Wireless Connections, as they also offer wireless connections to customers. If a third party used a pole or other structure for a proprietary wireless network and that pole did not have one or more third parties' wireless equipment used to offer wireless connectivity to other third parties, that structure would not fall within the scope of the definition of Commercial Pole. The Exchange believes that it is

reasonable for the definition to include other structures, not just poles, as other structures might be used to provide or support wireless equipment.

The Exchange believes that the proposed definition of “Data Center” would not be unfairly discriminatory because it would capture any data center in which the Exchange locates its matching engine. Similarly, the Exchange believes that the proposed definition of “Third Party Data Center” would not be unfairly discriminatory because it would capture any data center from which wireless connections are made to the Data Center using a Data Center Pole.

The Exchange believes that the proposed definition of “Data Center Pole” would not be unfairly discriminatory because it would encompass not just the current pole, but also any additional or successor pole or other structure that held wireless equipment and was on the grounds of the Data Center. For example, the equipment on the present data center pole belongs to IDS and Anova. Such pole would meet the definition of a “Data Center Pole,” even if a different third party contracted to utilize it, so long as the pole held wireless equipment and was on the grounds of the Data Center. The Exchange believes that it is reasonable for the definition to include other structures, not just poles, as structures besides poles might be used to provide or support wireless equipment.

The Exchange believes that it is would not be unfairly discriminatory to use the Patch Panel Point as an end point because every provider of wireless connectivity to co-location customers, including IDS and each of its competitors, is connected to the Patch Panel Point, and the length of the fiber path from the Patch Panel Point to each Customer Cabinet is the same. The proposal would establish in a rule an already existing fact. By so doing, the proposed rule would take distances within the Mahwah data center into account.

The latency of the Wireless Connections would increase as a result of the new rule. The Exchange is committed to the principal of having no measurable latency differential due to its use of a Data Center Pole. That goal is easier stated than met, however, because in order to compare two latencies, both have to be available. IDS’s commercial competitors and entities with proprietary wireless networks are not obligated to make their latency public. They are also not obligated to share latency figures with the Exchange or any of the ICE Affiliates or make it possible for the Exchange or an ICE Affiliate to measure the latency themselves. As a result, the Exchange cannot ensure that it would have access to the information required to measure whether there is any latency differential. In addition, no known commercial provider, including ICE Affiliates, has a network that follows the geodesic route, and the routes they do follow are both changeable and not publicly available. As a result, the Exchange cannot ensure that it would have access to the information required to measure what differences exist in the path followed between the Closest Commercial Pole and any Third Party Data Center.

Given the information available, the Exchange believes that the approach taken in

the proposed rule to address the distance differential between a Data Center Pole and the Closest Commercial Pole is not unfairly discriminatory. The proposed new rule is designed to provide that the customers using the Wireless Connections would not benefit from wireless equipment being on an ICE-controlled Data Center Pole that is closer to the Patch Panel Point than the Closest Commercial Pole. It is designed to reasonably ensure that data traversing the Wireless Connections via the Data Center Pole would travel the same fiber distance to the Patch Panel Point as data sent by third party wireless services via the Closest Commercial Pole, and to take the difference in the two poles' locations into account by adding the difference in length, if any, of the geodesic distance between each of them and the relevant Third Party Data Center. Because each Third Party Data Center may be in a different direction from the Data Center, the Exchange believes it is reasonable that the proposed rule would be in respect to each Third Party Data Center.

The Exchange will monitor its compliance with the proposed rule. Further, as noted above, if the rule is approved, once the required changes are implemented, the Exchange commits to have the latency of the fiber route between the Data Center Pole and Patch Panel Point measured. If a third party that uses the Closest Commercial Pole allows the Exchange or its ICE Affiliate to measure the latency of its fiber route between the Closest Commercial Pole and the Patch Panel Point, the Exchange undertakes to ensure that its latency is no less than that third party's latency, so long as (a) the third party equipment is the same or substantially similar to the equipment that the Exchange or its ICE Affiliate uses, and (b) the third party allows the Exchange or its ICE Affiliate to make latency measurements at least annually.^{53/54}

^{51/52} June McKay Letter, supra note 30/31, at 7.

^{52/53} Id., at note 33.

^{53/54} See note 50/51, supra.

7. The Exchange proposes to amend the section of the Filing titled “Self-Regulatory Organization’s Statement on Burden on Competition” in the following two ways:

The Exchange proposes to include information in the Filing regarding why it believes the proposed new rule would impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of Section 6(b)(8) of the Securities Exchange Act of 1934 (the “Act”).¹ Accordingly, the Exchange proposes to amend the section of the Filing titled “Self-Regulatory Organization’s Statement on Burden on Competition” in the following two ways.

¹ 15 U.S.C. 78f(b)(8).

First, to set the new text apart from the previous discussion regarding the burden on competition, the Exchange proposes to add the heading “Wireless Market Data Connectivity” immediately before the first full paragraph under the heading on page 20 of the Filing (page 49 of the Exhibit 1). The new heading would apply to the current text of the Filing.

Second, after the first full paragraph on page 22 of the Filing (second full paragraph on page 51 of the Exhibit 1), the Exchange proposes to add the heading “Proposed New Rule” and new paragraphs and accompanying footnotes (subsequent footnotes would be renumbered in a conforming change), as follows (all text is new):

Proposed New Rule

The Exchange does not believe that the proposed new rule would impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of Section 6(b)(8) of the Act.^{57/58}

With the exception of Anova, third parties do not have access to the data center pole. Under the proposed rule, the Exchange would be required to ensure that the length of the fiber path between the base of the Data Center Pole and the Patch Panel Point would be no less than the sum of (a) the length of the fiber path between the base of the Closest Commercial Pole and the Patch Panel Point, plus (b) the difference in length, if any, between (i) the geodesic distance between the Closest Commercial Pole and the Third Party Data Center and (ii) the geodesic distance between the Data Center Pole and the Third Party Data Center.

IDS, not the Exchange, provides the Wireless Connections to market participants and provides the previously filed wireless services that allow co-located users to receive market data feeds from third party markets through a wireless connection. It would be IDS that would have to increase the length of its fiber path, as required by the rule. Accordingly, the Exchange believes that the only burden on competition of the proposed change would be on IDS.

Nonetheless, the Exchange believes that the proposed rule change would not impose any burden on competition that is not necessary or appropriate because the proposed change would ensure that subscribers to services using the IDS wireless network did not benefit from physical proximity “on the segment [of the network] closest to the Exchanges’ data center that no competitor can replicate.”^{58/59} The networks for the Wireless Connections, and future wireless connections that use a Data Center Pole, would “operat[e] in the same manner as competitors do today without a latency subsidy or other advantage provided by the Exchanges....”^{59/60} In the words of one commentator, the proposed new rule

should provide other wireless connectivity service providers with the opportunity to compete with [IDS] by requiring that the connections between [IDS]’s wireless pole ... and competitor’s wireless pole ... be the same length.^{60/61}

The same commentator noted that “the fact that competitors can offer the same level of wireless connectivity services should constrain the price for NYSE’s wireless connectivity services.”^{61/62} The proposed rule would not otherwise put a burden on competition. As noted above, access to the data center pole is not required for third parties to establish wireless networks that can compete with the Wireless Connections to the Carteret and Secaucus Third Party Data Centers, as evidenced by the existing wireless connections offered by non-ICE entities.^{62/63} Indeed, the Exchange believes that its competitors’ wireless connections provide connectivity at the same or similar speed as the Wireless Connections, and at the same or similar cost. The June McKay Letter acknowledges that McKay Brothers has the fastest wireless network.^{63/64}

The Exchange notes that proximity to a data center is not the only determinant of a wireless network’s latency. Rather, the latency of a wireless network depends on several factors. Variables include the wireless equipment utilized; the route of, and number of towers or buildings in, the network; and the fiber equipment used at either end of the connection. Moreover, latency is not the only consideration that a customer may have in selecting a wireless network to connect to for market data. Other considerations may include the amount of network uptime; the equipment that the network uses; the cost of the connection; and the applicable contractual provisions.

The proposed change does not affect competition among national securities exchanges or among members of the Exchange, but rather between IDS and its commercial competitors.

^{57/58} 15 U.S.C. 78f(b)(8).

^{58/59} June McKay Letter, supra note 30/31, at note 33.

^{59/60} Id., at 7.

^{60/61} Letter from Ellen Greene, Managing Director, Equity and Options Market Structure, Securities Industry and Financial Markets Association, to Ms. Vanessa Countryman, Secretary, Commission, dated September 2, 2020, at 3.

^{61/62} Id.

^{62/63} A market participant in any of the Third Party Data Centers or the Mahwah data center also may create a proprietary wireless market data connection, connect through another market participant, or utilize fiber connections offered by the Exchange, ICE Affiliates, and other service providers and third party telecommunications providers.

^{63/64} Id., at 4.

8. The Exchange proposes to add a list under “Exhibit 5 – Text of the Proposed Rule Change” on page 23 of the Filing:

The Exchange proposes to add a new Exhibit 5B. Accordingly, the Exchange proposes to add a list under “Exhibit 5 – Text of Proposed Rule Change” on page 23 of the Filing, as follows (new text underlined):

Exhibit 5 – Text of the Proposed Rule Change

A. Text of the Proposed Schedule of Wireless Connectivity Fees and Charges

B. Text of the Proposed Rule

9. The Exchange proposes to add new text to the first full paragraph of Section I on page 24 of the Exhibit 1:

The Exchange proposes to add new text to the first full paragraph of Section I on page 24 of the Exhibit 1, as follows (new text underlined):

The Exchange proposes to establish a schedule of Wireless Connectivity Fees and Charges (the “Wireless Fee Schedule”) with wireless connections between the Mahwah, New Jersey data center and other data centers and add a new rule to place restrictions on the use of a pole or other structure on the grounds of the Mahwah, New Jersey data center that is used for such wireless connections. The proposed rule change is available on the Exchange’s website at www.nyse.com, at the principal office of the Exchange, and at the Commission’s Public Reference Room.

10. The Exchange proposes to amend “Exhibit 5” to “Exhibit 5A” on page 55 of the Exhibit 5:

To reflect the addition of a new Exhibit 5B, the Exchange proposes to add “A” to “EXHIBIT 5” on page 55 of the Exhibit 5, to make it to “EXHIBIT 5A”.

All other representations in the Filing remain as stated therein and no other changes are being made.

No changes from Exhibit 5 to SR-NYSECHX-2020-02

All text is new

**New York Stock Exchange LLC
NYSE American LLC
NYSE Arca, Inc.
NYSE Chicago, Inc.
NYSE National, Inc.**

Wireless Connectivity Fees and Charges

Last Updated: ●, 2020

General Note

A market participant that incurs fees from the New York Stock Exchange LLC, NYSE American LLC, NYSE Arca, Inc., NYSE Chicago, Inc. or NYSE National, Inc. (collectively, the “Affiliate SROs”) for a particular service pursuant to this Fee Schedule shall not be subject to fees for the same service charged by the other Affiliate SROs.

A. Wireless Connectivity

The following fees are subject to a 30-day testing period, during which the monthly charge per connection is waived.

Type of Service	Description	Amount of Charge
Wireless Connection between Mahwah Data Center and Secaucus access center	10 Mb Circuit	\$10,000 per connection initial charge plus monthly charge per connection of \$9,000
Wireless Connection between Mahwah Data Center and Secaucus access center	50 Mb Circuit	\$10,000 per connection initial charge plus monthly charge per connection of \$13,500
Wireless Connection between Mahwah Data Center and Secaucus access center	100 Mb Circuit	\$10,000 per connection initial charge plus monthly charge per connection of \$23,000
Wireless Connection between Mahwah Data Center and Secaucus access center	200 Mb Circuit	\$10,000 per connection initial charge plus monthly charge per connection of \$44,000
Wireless Connection between Mahwah Data Center and Carteret access center	10 Mb Circuit	\$10,000 per connection initial charge plus monthly charge per connection of \$10,000
Wireless Connection between Mahwah Data Center and Carteret access center	50 Mb Circuit	\$10,000 per connection initial charge plus monthly charge per connection of \$15,000

Type of Service	Description	Amount of Charge
Wireless Connection between Mahwah Data Center and Carteret access center	100 Mb Circuit	\$10,000 per connection initial charge plus monthly charge per connection of \$25,000
Wireless Connection between Mahwah Data Center and Carteret access center	200 Mb Circuit	\$10,000 per connection initial charge plus monthly charge per connection of \$45,000
Wireless Connections between (a) Mahwah Data Center and Carteret access center and (b) Mahwah Data Center and Secaucus Data Center	50 Mb Circuits	\$15,000 initial charge for both connections plus monthly charge for both connections of \$22,000
Wireless Connection between Mahwah Data Center and Markham access center	1 Mb Circuit	\$10,000 per connection initial charge plus monthly charge per connection of \$6,000
Wireless Connection between Mahwah Data Center and Markham access center	5 Mb Circuit	\$10,000 per connection initial charge plus monthly charge per connection of \$15,500
Wireless Connection between Mahwah Data Center and Markham access center	10 Mb Circuit	\$10,000 per connection initial charge plus monthly charge per connection of \$23,000

All text added to Exhibit 5 to SR-NYSECHX-2020-02 in Amendment No. 3

Additions underscored

Rules of NYSE Chicago, Inc.

* * * * *

RULE 3 ORGANIZATION AND ADMINISTRATION

* * * * *

Rule 3.12. Reserved

Rule 3.13. Data Center Pole Restrictions--Connectivity to Co-Location Space

(a) For purposes of this rule the terms below are defined as follows:

(1) “Closest Commercial Pole” means the Commercial Pole that has the shortest fiber path between the Patch Panel Point and the base of the Commercial Pole.

(2) “Commercial Pole” means a pole or other structure (a) on which one or more third parties locate wireless equipment used to offer wireless connectivity to other third parties, and (b) from which a fiber connection extends from third party equipment on the pole to the Data Center.

(3) “Data Center” means the Mahwah, New Jersey data center where the Exchange’s matching engine is located, or its successor.

(4) “Data Center Pole” means a pole or other structure that (a) holds wireless equipment, and (b) is located within the grounds of the Data Center.

(5) “Patch Panel Point” means the patch panel where fiber connections for wireless services connect to the network row in the space used for co-location in the Data Center.

(6) “Third Party Data Center” means a service access point from which wireless connections to the Data Center using a Data Center Pole are made available.

(b) With respect to each Third Party Data Center, the length of the fiber path between the base of any Data Center Pole and the Patch Panel Point shall be no less than the sum of

(1) the length of the fiber path between the base of the Closest Commercial Pole and the Patch Panel Point, plus

- (2) the difference in length, if any, between (i) the geodesic distance between the Closest Commercial Pole and the Third Party Data Center and (ii) the geodesic distance between the Data Center Pole and the Third Party Data Center.
- (c) The length of the fiber from the Patch Panel Point to each customer cabinet in the space used for co-location in the Data Center shall be the same.

* * * * *

All text is new

**New York Stock Exchange LLC
NYSE American LLC
NYSE Arca, Inc.
NYSE Chicago, Inc.
NYSE National, Inc.**

Wireless Connectivity Fees and Charges

Last Updated: ●, 2020

General Note

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Wireless Connection between Mahwah Data Center and Carteret access center	50 Mb Circuit	\$10,000 per connection initial charge plus monthly charge per connection of \$15,000

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Wireless Connection between Mahwah Data Center and Carteret access center	100 Mb Circuit	\$10,000 per connection initial charge plus monthly charge per connection of \$25,000
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(3) “Data Center” means the Mahwah, New Jersey data center where the Exchange’s matching engine is located, or its successor.

(4) “Data Center Pole” means a pole or other structure that (a) holds wireless equipment, and (b) is located within the grounds of the Data Center.

(5) “Patch Panel Point” means the patch panel where fiber connections for wireless services connect to the network row in the space used for co-location in the Data Center.

(6) “Third Party Data Center” means a service access point from which wireless connections to the Data Center using a Data Center Pole are made available.

(b) With respect to each Third Party Data Center, the length of the fiber path between the base of any Data Center Pole and the Patch Panel Point shall be no less than the sum of

(1) the length of the fiber path between the base of the Closest Commercial Pole and the Patch Panel Point, plus

- (2) the difference in length, if any, between (i) the geodesic distance between the Closest Commercial Pole and the Third Party Data Center and (ii) the geodesic distance between the Data Center Pole and the Third Party Data Center.
- (c) The length of the fiber from the Patch Panel Point to each customer cabinet in the space used for co-location in the Data Center shall be the same.

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