



An Coimisiún um
Rialáil Cumarsáide
Commission for
Communications Regulation

Information Notice

Approval relating to the Eircom development
'The NTU Connection Product'

Information Notice

Reference: ComReg 21/41

Version: Final

Date: 23/04/2021

An Coimisiún um Rialáil Cumarsáide
Commission for Communications Regulation

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Additional Information

Document No:	21/41
Date:	23 April 2021

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1. Introduction

1. Eircom Limited (**'Eircom'**) plans to launch a new regulated wholesale product in September of this year known as the 'NTU Connection Product'. This product will allow retailers using the product to provide a broadband service by providing their own in-house equipment instead of relying on Eircom's. This equipment is referred to as an Optical Network Terminal (**'ONT'**) which comes either as a standalone unit or as a unit that combines the functionality of an ONT and a Customer Premise Equipment (**'CPE'**) router into a single unit, also known as a 'Combi-box'. ComReg is of the view that the new product has the potential to enhance competition and improve the experience of end-users.
2. This new product entails amendments to the rules and technical standards for deployment of equipment in Eircom's access network, for which ComReg's approval is required under Section 8.13 of the Wholesale Local Access Decision Instrument set out in Appendix 20 to ComReg Decision D10/18¹ (**'Section 8.13 of the WLA Decision Instrument'**). Section 8.13 provides that:

"Eircom shall not amend the rules or technical standards for the deployment of equipment in the Access Network including the CLFMP or equivalent without the prior written approval of ComReg and in accordance with terms and conditions as may be determined by ComReg."

3. ComReg has granted its approval subject however to certain Requirements which are set out at Annex 1 below.
4. One condition attached to ComReg's approval concerns the provision of testing facilities sufficiently in advance of launch. Eircom has said in correspondence as part of the approval process that it will not be able to make testing facilities available until 1 September 2021, which is approximately three weeks in advance of launch. It said that this is because testing cannot start until after the product is put into production, which is scheduled for 29 August 2021. ComReg is concerned that this time period for testing might not be sufficient. ComReg accordingly has required Eircom to make test facilities available from eight weeks in advance of launch, or for a shorter period of time as may be determined by ComReg on or before 31 May 2021.²

¹ See Market Review: Wholesale Local Access (WLA) provided at a Fixed Location, Wholesale Central Access (WCA) provided at a Fixed Location for Mass Market Products, Response to Consultation and Decision, ComReg Decision [D10/18](#), Appendix 20.

² See Requirement A1.4 as set out in Annex 1 of this Information Notice.

5. More particularly, ComReg might consider reducing the minimum period of time required for testing pre-launch, taking into account the views of operators intending to use this product from the time of launch as to whether the eight-week period is necessary or if it could be shortened. ComReg would also welcome any proposal by Eircom to enable testing earlier than 1 September. Accordingly, ComReg invites all such prospective users and Eircom to provide their views to ComReg in writing **before 7 May 2021** as to whether or not a shorter pre-launch testing period should be allowed. Those operators who are of the view that a period of eight weeks is in fact required are also invited to communicate this to ComReg by this date.
6. The remainder of this Information Notice provides additional detail on the NTU Connection Product and ComReg's approval of associated amendments to the rules and technical standards for the deployment of equipment in Eircom's access network, pursuant to Section 8.13 of the WLA Decision Instrument.

2. The NTU Connection Product

7. On 14 January 2020, ComReg made a decision to grant approval to Eircom to amend the rules and technical standards for the deployment of equipment in Eircom's access network in respect of an Eircom development referred to as CRD³ ID 551.1 'Ireland's Fibre Network - IFN (Phase 1)'⁴.
8. The Eircom term "Ireland's Fibre Network" relates to an extension to Eircom's FTTH platform to larger towns and urban centres. For this FTTH rollout, Eircom deployed, for the first time, technology known as XGS-PON⁵. As a technology, XGS-PON has the capability to allow for download or upload speeds of greater than 1 Gb/s.
9. Eircom has now published a subsequent development relating to XGS-PON, referred to as CRD ID 552, the 'NTU Connection Product', an overview of which is provided in the paragraphs below.
10. The NTU Connection Product will add an option for how operators connect their equipment to Eircom's network at a customer premises. At present, operators purchasing wholesale FTTH based products connect their Customer Premises Equipment ('**CPE**') to the Ethernet interface presented at an Eircom installed Optical Network Terminal ('**ONT**')⁶ that is connected to an Eircom fibre Network Termination Unit ('**NTU**') at the customer's premises, which is also installed by Eircom. With the NTU Connection Product, operators will have the option to install and connect their own ONT⁷ to the Eircom NTU via their own fibre patch cable. These two models of operation are referred to in this Information Notice as respectively, the '**ONT Connection Model**', and the '**NTU Connection Model**'. The NTU Connection Model will not be a replacement to the ONT Connection Model but rather made available in parallel to it.

³ Customer Requirements Document (hereafter '**CRD**') is a document used by Eircom in which a request for Access is described. Each RAP under development will have its own CRD and an associated CRD ID.

⁴ ComReg's decision to provide approval for this development was published in Information Notice "ComReg approval of Eircom development CRD 551.1" (Document No. 20/05, Date 15 January 2020).

⁵ The first deployment of 10-Gigabit-capable symmetric passive optical network (hereafter '**XGS-PON**') in Eircom's access network, Eircom's previous FTTH deployed have been served by technology known as GPON.

⁶ At the User Network Interface (hereafter '**UNI**') reference point as described in the reference configuration of ITU-T recommendation G.9807.1.

⁷ It is proposed that such ONTs may be installed as 'Standalone' ONTs (having ONT functionality only) or 'Combi boxes' (having ONT and residential gateway/CPE functionality built into the same physical unit).

11. Figure 1 and Figure 2 below illustrate the ONT Connection Model and the NTU Connection Model, by reference only for simplicity to Virtual Unbundled Access ('VUA').

Figure 1 ONT Connection Model

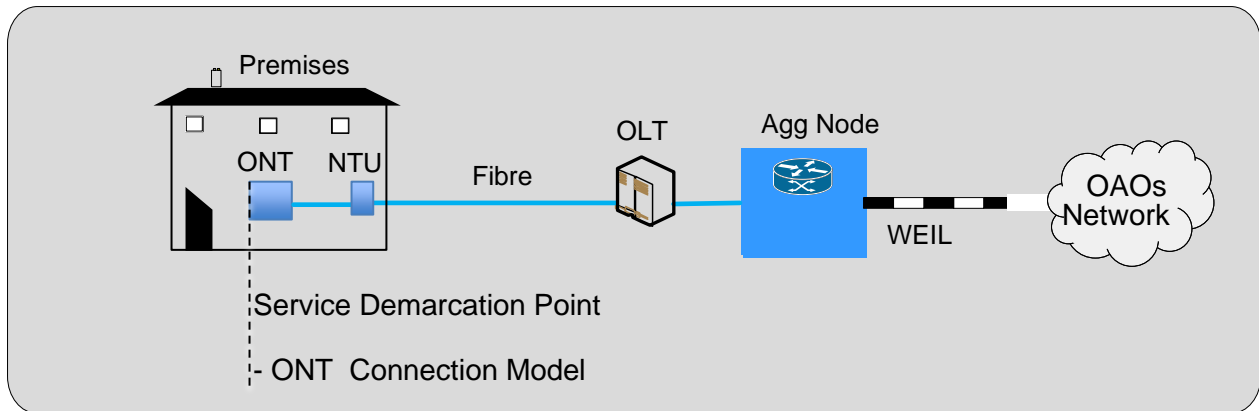
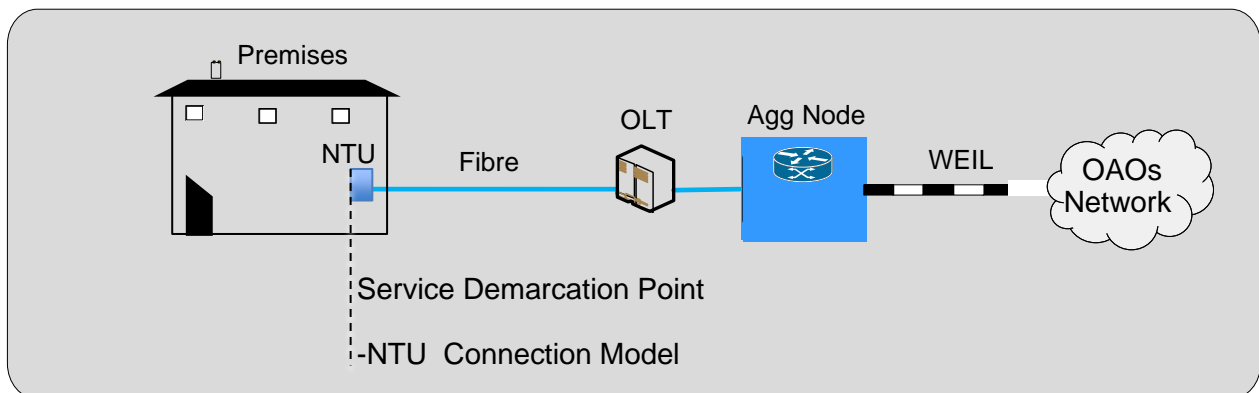


Figure 2 NTU Connection Model



12. The NTU Connection Model involves exposing for the first time to operators the Eircom interface presented at the NTU for connection of an operator's ONT⁸. This will result in a change of the interface presented to operators from one based on an Ethernet technical standard, currently presented via the ONT Connection Model at the ONT, to one based on an XGS-PON⁹ technical standard that would be presented at the NTU.

⁸ The Receive/Send (hereafter 'R/S') reference point at the interface of the ONT to the Optical Distribution Network as described in the reference configuration of ITU-T recommendation G.9807.1.

⁹ 10-Gigabit-capable symmetrical passive optical network, as described in ITU-T G.9807.1.

13. ComReg considers that the NTU Connection Product can encourage innovation and service differentiation to the benefit of competition and therefore to the ultimate benefit of end-users. For example, it will enable operators to combine the functionality of the ONT and the CPE into one physical device (a 'Combi-box'), thereby providing end-users with a better in-home experience. This is in terms of, for example, aesthetic appearance but also in terms of only one power socket being required to power such a single unit. In addition, operators can invest in developing their own ONTs or Combi-boxes to differentiate service offerings to end-users.

3. Approval of amendments to rules and technical standards

14. As referred to above, Section 8.13 of the WLA Decision Instrument provides that:

“Eircom shall not amend the rules or technical standards for the deployment of equipment in the Access Network including the CLFMP or equivalent without the prior written approval of ComReg and in accordance with terms and conditions as may be determined by ComReg.”

15. These rules and technical standards define what specifications network equipment must comply with in order to ensure that services offered over Eircom’s Access Network operate correctly. Such rules and standards ensure that the introduction of new network equipment does not have adverse effects on equipment already installed or on services already being availed of by end-users.

16. Eircom’s product documentation relating to the NTU Connection Product contains amendments to such rules and technical standards for deployment of equipment in Eircom’s access network.

17. On 5 February 2021, Eircom submitted a notification to ComReg pursuant to Eircom’s transparency obligation under Section 10.9 of the WLA Decision Instrument, notifying ComReg of Eircom’s intention to publish product documentation setting out Eircom’s offer of the NTU Connection Product. As part of this notification, Eircom requested approval of the interface specification included in the Next Generation Access Technical Manual for the FTTH ONT, thereby engaging Section 8.13 of the WLA Decision Instrument.

18. On 22 April 2021, ComReg, by decision pursuant to Section 8.13 of the WLA Decision Instrument, approved these amendments, subject to conditions. In reaching this decision, ComReg has taken account of the following with respect to the NTU Connection Product:

- a) The NTU Connection Model is not a replacement of the ONT Connection Model and operators may continue to purchase FTTH connections from Eircom based on the current ONT Connection Model.
- b) Eircom has provided information pertinent to the NTU Connection Product to operators in a timely manner. ComReg notes in particular that:

- i. Eircom shared information with operators on the specification required for an operator ONT on 23 August 2019¹⁰.
 - ii. Eircom shared information with operators on the processes by which operators can perform pre-ordering and ordering of the NTU Connection Product on 23 March 2020¹¹.
 - c) ComReg considers that the NTU Connection Model can encourage innovation and service differentiation for operators which is beneficial to competition and therefore ultimately beneficial to end-users.
 - d) ComReg considers that the NTU Connection Model can provide a better in-home experience for end-users.
19. The conditions attached to the approval are in the form of the Requirements set out in Annex 1 of this Information Notice.
20. The Requirements formalise, with some amendments, the approach proposed by Eircom¹² to operators in respect of the provision by Eircom of test facilities and information on potential issues that may be encountered during the different testing phases of operators' equipment.
21. As per Requirement A1.4 of Annex 1 of this Information Notice, Eircom is required to, at a minimum of eight weeks in advance of launch of the NTU Connection Product, make available a test facility(s) to allow operators to carry out their own verification of their own ONTs or Combi-boxes with Eircom's deployment of XGS-PON. While Eircom has indicated as part of the approval process that it intends to make testing facilities available from 1 September 2021, in other words, in or around three weeks in advance of launch, ComReg was concerned that this would not be sufficient. ComReg accordingly has required Eircom to make test facilities available from eight weeks in advance of launch, or for a shorter period of time as may be determined by ComReg on or before 31 May 2021.¹³ ComReg, in particular, could reduce that period of time with the view to avoiding any potential delay to launch arising from the 8 week pre-launch testing period, were operators intending to use this product from the time of launch of the view that an eight-week period is not necessary and could be shortened. In this context ComReg will consider representations from those operators who intend to utilise the NTU Connection Product from the time of its launch and are of the view that a shorter time period of testing would be sufficient in advance of

¹⁰ Email from Eircom to operators sent 23 August 2019.

¹¹ Email from Eircom to operators sent 23 March 2020.

¹² As described in a document circulated by Eircom to operators on 02 February 2021.

¹³ See Requirement (iv) as set out in Annex 1 of this Information Notice.

launch. ComReg would also welcome any proposal by Eircom to enable testing earlier than 1 September. Accordingly, ComReg invites all such prospective users and Eircom to provide their views to ComReg in writing **before 7 May 2021**. Those operators who are of the view that a period of eight weeks is in fact required are also invited to communicate this to ComReg by this date.

22. Operators should also note that as per A1.5 of Annex 1 such test facilities shall continue to be provided by Eircom to operators on an ongoing basis post launch and may not be removed without the prior approval of ComReg. This is to facilitate those operators who may wish to begin to utilise the NTU Connection Product at a later point in time and to support operators' in-life support of their ONTs or Combi-boxes.

Annex 1: Requirements attached to approval under Section 8.13 of the WLA Decision Instrument

- A 1.1 Within one week of ComReg's Decision providing approval to Eircom to amend the rules and technical standards for deployment of equipment in the access network with respect to the NTU Connection Product, Eircom shall write to all undertakings to inform them of the relevant processes relating to verification of undertakings' ONTs or Combi-boxes, how Eircom test facilities will be made available to undertakings, providing relevant contact details and explaining the process and notice periods by which undertakings can avail of such facilities. Eircom shall, as appropriate, write to all undertakings to inform them of any updates to such processes relating to verification of undertakings' ONTs or Combi-boxes that may arise following any decision by ComReg to amend the duration of the availability of test facilities in advance of launch of the NTU Connection Product, as provided for in Requirement A1.4.
- A 1.2 For a period of 12 months following publication of the product collateral for the NTU Connection Product, Eircom shall not place any additional technical requirements on undertakings' ONTs, Combi-boxes or fibre patch cables beyond those communicated to undertakings on 23 August 2019. Within one week of a decision from ComReg providing approval to Eircom to amend the rules and technical standards for deployment of equipment in the access network with respect to the NTU Connection Product, Eircom shall, if not done so already, amend its product collateral for the NTU Connection Product to state that any references to additional technical specifications for undertakings' ONTs, Combi-boxes or fibre patch cables beyond those communicated to undertakings on 23 August 2019 are not mandatory for Access Seekers to comply with.
- A 1.3 Within two weeks of a decision from ComReg providing approval to Eircom to amend the rules and technical standards for deployment of equipment in the access network with respect to the NTU Connection Product, Eircom shall establish and implement a process for verifying the interoperability of undertaking's ONTs and Combi-boxes with its deployment of XGS-PON. Eircom shall carry out such verification and publish a list of ONTs and Combi-boxes that have successfully completed such verification, this shall be anonymised as appropriate. Where an undertaking's ONT or Combi-box does not pass a required test case(s) as part of such verification as a result of the undertaking's ONT or Combi-box not adhering to

a relevant technical standard, Eircom shall provide that undertaking with appropriate information on the failed test case(s) as would reasonably be required for the undertaking to investigate and resolve the reason for failure. Eircom shall provide this information within a timely manner of having identified the failure of such a test case(s) and provide timely responses to technical queries that undertakings may have in relation to such test cases. Where a required test(s) is not passed as a result of a failure of components of Eircom's deployment of XGS-PON not adhering to a relevant technical standard, Eircom shall act expeditiously to ensure that such a failure is resolved in a timely manner and shall keep the relevant undertaking(s) informed of the progress of the resolution of such issues in a timely manner.

A 1.4 At a minimum of eight weeks in advance of launch of the NTU Connection Product (which period, however, may be amended by ComReg on or before 31 May 2021), Eircom shall make available a test facility(s) to allow undertakings to carry out their own verification of their own ONTs or Combi-boxes with Eircom's deployment of XGS-PON. Such test facilities shall include the ability for undertakings to interconnect to their own management platforms for the purpose of verifying the management of their ONTs or Combi-boxes and the ability to verify provisioning processes.

A 1.5 Such test facilities shall continue to be provided by Eircom to undertakings on an ongoing basis post launch and may only be withdrawn with ComReg's approval.

A 1.6 At the time of writing to undertakings to advise them that test facilities are being made available in advance of launch of the NTU Connection Product (as set out in paragraph A 1.1 above), Eircom shall document and share, in writing, with undertakings and ComReg, the process it will have in place, prior to and post launch of the NTU Connection Product, for resolution of potential interoperability issues that may be identified with respect to the interoperability of Eircom's deployment of XGS-PON and the ONTs and Combi-boxes of undertakings. This process shall set out how undertakings will be provided in a timely manner with transparency with respect to issues that may be identified that have the potential to be common to the ONTs and Combi-boxes of more than one undertaking and the plans for and progress of the resolution of such issues and how individual undertakings will be provided same with respect to issues that are specific to their ONTs or Combi-boxes. This process shall in particular set out how all material issues with respect to Eircom's deployment of XGS-PON not adhering to a relevant technical standard identified during the testing phases that may risk an undertaking's ability to participate in the launch of the NTU Connection Product will be resolved in advance of such a launch.

A 1.7 One month in advance of launch of the NTU Connection Product, Eircom shall provide undertakings and ComReg with a test report of any and all Eircom's own testing, including testing carried out by another party on Eircom's behalf, with respect to the NTU Connection Product and all test results that may have been shared with Eircom by undertakings by that date, including test results relevant to paragraph A 1.6 above. This test report will cover the period of time from when the verification process as set out in paragraph A 1.3 above was made available to undertakings up until the time of providing the above test report. In advance of making the above test report available, Eircom shall seek the consent of the undertakings who have shared test results of their own testing with Eircom or who have had their ONTs or Combi-boxes tested by Eircom or another party acting on Eircom's behalf, to have such results included in this report. The test report should be sufficiently detailed to provide undertakings and ComReg with sufficient clarity on what test cases have been carried out, whether such test cases were successful or unsuccessful and, in the case of unsuccessful test cases, a description of the issue or issues encountered and the plan for resolution, where appropriate. Where and if required to maintain confidentiality, Eircom may anonymise information for the purpose of providing a version of the report to the undertakings. The version of the report to be provided to ComReg shall contain the non-anonymised information. Where an undertaking declines to share test results with Eircom, refuses consent to Eircom to share test results with ComReg and/or refuses consent to Eircom to share test report with other undertakings, ComReg would expect Eircom to inform ComReg of the identity of the undertaking and the reason provided by the undertaking for declining.

A 1.8 At the same time as providing the report required above in paragraph A 1.7, Eircom to write to ComReg confirming as follows:

- (a) that Eircom still intends to proceed with the launch of the NTU Connection Product six months following the date of publication of the relevant product collateral, or the date it intends to proceed with the launch of NTU Connection Product if different; and
- (b) the process and timelines for the resolution of any outstanding issues identified in the test report required above. These shall in particular set out how all material issues with respect to Eircom's deployment of XGS-PON not adhering to a relevant technical standard that may risk an undertaking's ability to participate in the launch of the NTU Connection Product will be resolved in advance of such a launch.

A 1.9 The time periods set out in this Annex may be varied with agreement of ComReg or at ComReg's discretion.

A 1.10 For the purpose of Requirements A 1.1 to A 1.9, the Effective Date is the date ComReg notified Eircom of ComReg's decision to grant approval pursuant to Section 8.13 subject to conditions in respect of the amendment of the rules and technical standards for deployment of equipment in the access network with respect to the NTU Connection Product, this date is 23 April 2021.

A 1.11 The undertakings referred to in these Requirements are those undertakings who have entered into a contract with Eircom based on Eircom's Access Reference Offer ('**ARO**') or Eircom's Wholesale Bitstream Access Reference Offer ('**WBARO**') as well as Eircom's downstream arm as appropriate.