



Commission for
Communications Regulation

Information Notice

GSM Liberalisation Project: Publication of correspondence and other material provided by interested parties (and ComReg's written responses to same) relating to MBSA process dating from 13 July 2012 to 3 January 2013

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A.1 Non-confidential correspondence and other material provided by interested parties (and ComReg’s written responses to same) relating to MBSA process dating from 13 July 2012 to 3 January 2013. Presented in six volumes (a – f).

Document 13/29a

1. ComReg: letter to Telefonica “Bidder Materials and mock auctions for Multi-Band Spectrum Award” [Redacted] (letter dated 26 July 2012)
2. ComReg: letter to Telefonica “Deposit” [Redacted] (letter dated 26 July 2012)
3. ComReg: letter to Telefonica “MBSA Application Clarifications” [Redacted] (letter dated 8 August 2012)
4. ComReg: letter to Telefonica “Review of MBSA Application” [Redacted] (letter dated 24 August 2012)
5. ComReg: letter to Telefonica “Multi-Band Spectrum Award – Adjustment to the auction timetable” (letter dated 14 September 2012)
6. ComReg: letter to Telefonica “Amendment to ComReg Document 12/52 Information Memorandum (“IM”)” (letter dated 20 September 2012)
7. ComReg: letter to Telefonica “ComReg’s letter to you of the 14 September 2012” (letter dated 27 September 2012)
8. ComReg: letter to Telefonica “Updated Bidder Materials for Multi-Band Spectrum Award” [Redacted] (letter dated 3 October 2012)
9. A&L Goodbody: letter to ComReg “Multi-Band Spectrum Auction - 800 MHz, 900 MHz & 1800 MHz (“the Auction”)” (letter dated 31 October 2012)
10. Irish Independent: Article “State can make €533m in digital switch” (article dated 25 October 2012)
11. Public Policy.ie: Article “Budget 2013 – Saorview Switchover a Windfall for Government” (article dated 24 October 2012)
12. ComReg: letter to A&L Goodbody “Multi-band Spectrum Auction – 800 MHz, 900 MHz & 1800 MHz” (letter dated 1 November 2012)
13. ComReg: letter to Telefonica “Article entitled “*Low phone use puts O2 on hold*” (letter dated 31 October 2012)
14. Sunday Times: Article “Low phone use puts O2 on hold” (article dated 28 October 2012)
15. Telefonica: letter to ComReg “Letter dated 31st October 2012” (letter dated 1 November 2012)
16. ComReg: letter to Telefonica “MBSA – Deposit Call” [Redacted] (letter dated 2 November 2012)
17. Telefonica: letter to ComReg “Deposit Call” [Redacted] (letter dated 2 November 2012)
18. ComReg: letter to Telefonica “Deposit Call” [Redacted] (letter dated 6 November 2012)
19. ComReg: letter to Telefonica “MBSA – Receipt of Deposit Call” [Redacted] (letter dated 8 November 2012)
20. ComReg: letter to Telefonica “Telefonica’s participation in the MBSA process” (letter dated 15 November 2012)
21. ComReg: letter to Telefonica “MBSA process” (letter dated 20 November 2012)
22. ComReg: letter to Telefonica “Return of Surplus Deposit plus Interest Earned” [Redacted] (letter dated 22 November 2012)

23. Telefonica: letter to ComReg “Deposit Interest” [Redacted] (letter dated 28 November 2012)
24. ComReg: letter to Telefonica “Deposit Interest” [Redacted] (letter dated 30 November 2012)
25. ComReg: letter to Telefonica “Return of Additional Interest Earned” [Redacted] (letter dated 30 November 2012)
26. ComReg: letter to Telefonica “End of Assignment Stage and Auction” (letter dated 5 December 2012)
27. Telefonica: letter to ComReg “MBSA Assignments” (letter dated 28 November 2012)
28. ComReg: letter to Telefonica “MBSA process” (letter dated 4 December 2012)
29. ComReg: letter to Telefonica “Entitlement to apply for a Preparatory and a Liberalised Use Licence” (letter dated 18 December 2012)

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30. ComReg: letter to Vodafone “Joint Venture arrangement between Vodafone Ireland Limited and Hutchinson 3G Ireland Limited” (letter dated 13 July 2012)
31. ComReg/Vodafone: Email exchange between Vodafone and ComReg “Draft Response regarding query / Strictly Confidential: ComReg MBSA Application form (ComReg document 12/52aR)” (final email dated 13 July 2012)
32. ComReg: letter to Vodafone “Bidder Materials and mock auctions for Multi-Band Spectrum Award” [Redacted] (letter dated 26 July 2012)
33. ComReg: letter to Vodafone “Deposit” [Redacted] (letter dated 26 July 2012)
34. ComReg: letter to Vodafone “MBSA Application Clarifications” [Redacted] (letter dated 8 August 2012)
35. Vodafone: letter to ComReg “Vodafone Questions and Requests Following MBSA Mock Auction” [Redacted] (letter dated 15 August 2012)
36. ComReg: letter to Vodafone “Letter of 15th August” (letter dated 15 August 2012)
37. ComReg: letter to Vodafone “Review of MBSA Application” [Redacted] (letter dated 24 August 2012)
38. Vodafone: letter to ComReg “Vodafone’s Second Mock Auction” (letter dated 7 September 2012)
39. ComReg: letter to Vodafone “ComReg Multi-Band Spectrum Award (MBSA) Process – Vodafone’s second mock auction of 7 September 2012” (letter dated 10 September 2012)
40. Vodafone: emails to ComReg “MSA” (emails dated 13 September 2012)
41. ComReg: letter to Vodafone “Email of the 13 September” (letter dated 14 September 2012)
42. ComReg: letter to Vodafone “Multi-Band Spectrum Award – Adjustment to the auction timetable” (letter dated 14 September 2012)
43. ComReg/Vodafone: Email exchange between Vodafone and ComReg “Multiband Spectrum Auction: ComReg Publication of Spectrum Correspondence” (final email dated 12 September 2012)
44. Vodafone: letter to ComReg “Multi-Band Spectrum Award Process” (letter dated 12 September 2012)
45. ComReg: letter to Vodafone “Multi-Band Spectrum Award – file formats” (letter dated 18 September 2012)

46. Vodafone: letter to ComReg “Multi-Band Spectrum Release: Outstanding Technical Issues” (letter dated 18 September 2012)
47. ComReg: letter to Vodafone “Multi-Band Spectrum Release: Outstanding Technical Issues” [Redacted] (letter dated 20 September 2012)
48. ComReg: letter to Vodafone “Amendment to ComReg Document 12/52 Information Memorandum (“IM”)” (letter dated 20 September 2012)
49. ComReg: letter to Vodafone “ComReg’s letter to you of the 14 September 2012” (letter dated 27 September 2012)
50. Vodafone: letter to ComReg “Mock Auction for Multi-Band Spectrum Award Process (“Mock Auction”)” [Redacted] (letter dated 2 October 2012)
51. ComReg: letter to Vodafone “Mock Auction for Multi-Band Spectrum Award Process” (letter dated 3 October 2012)
52. ComReg: letter to Vodafone “Updated Bidder Materials for Multi-Band Spectrum Award” [Redacted] (letter dated 3 October 2012)
53. Vodafone: letter to ComReg “Updated Bidder Materials for Multi-Band Spectrum Award (“MBSA”)” (letter dated 8 October 2012)
54. ComReg: letter to Vodafone “Updated Bidder Materials for Multi-Band Spectrum Award (“MBSA”)” (letter dated 11 October 2012)
55. Vodafone: letter to ComReg “Updated Bidder Materials for Multi-Band Spectrum Award” (letter dated 12 October 2012)
56. ComReg: letter to Vodafone “Updated Bidder Materials for Multi-Band Spectrum Award (“MBSA”)” [Redacted] (letter dated 12 October 2012)
57. Vodafone: letter to ComReg “Multi-Band Spectrum Award (“MBSA”) Process” (letter dated 31 October 2012)
58. ComReg: letter to Vodafone “Multi-Band Spectrum Award (“MBSA”) Process” (letter dated 2 November 2012)
59. ComReg: letter to Vodafone “MBSA – Deposit Call” [Redacted] (letter dated 2 November 2012)
60. ComReg: letter to Vodafone “MBSA – Receipt of Deposit Call” [Redacted] (letter dated 7 November 2012)
61. ComReg: letter to Vodafone “Vodafone’s participation in the MBSA process” (letter dated 11 November 2012)
62. ComReg: letter to Vodafone “MBSA process” (letter dated 20 November 2012)
63. ComReg: letter to Vodafone “Return of Surplus Deposit plus Interest Earned” [Redacted] (letter dated 22 November 2012)
64. ComReg: letter to Vodafone “Return of Additional Interest Earned” [Redacted] (letter dated 30 November 2012)
65. ComReg: letter to Vodafone “End of the Assignment Stage and Auction” (letter dated 5 December 2012)
66. Vodafone: letter to ComReg “Multi-Band Spectrum Auction (“MBSA”) Process” (letter dated 21 November 2012)
67. ComReg: letter to Vodafone “MBSA process” (letter dated 23 November 2012)
68. ComReg: letter to Vodafone “Entitlement to apply for a Preparatory and a Liberalised Use Licence” (letter dated 18 December 2012)

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69. ComReg: letter to MMC “Bidder Materials and mock auctions for Multi-Band Spectrum Award” [Redacted] (letter dated 26 July 2012)
70. ComReg: letter to MMC “Deposit” [Redacted] (letter dated 26 July 2012)

71. ComReg: letter to MMC “MBSA Application Clarifications” [Redacted] (letter dated 8 August 2012)
72. ComReg: letter to MMC “Review of MBSA Application” [Redacted] (letter dated 24 August 2012)
73. MMC: letter to ComReg “Multi-Band Spectrum Award” [Redacted] (letter dated 7 September 2012)
74. ComReg: letter to MMC “Letter of the 7th September” (letter dated 14 September 2012)
75. ComReg: letter to MMC “Multi-Band Spectrum Award – Adjustment to the auction timetable” [Redacted] (letter dated 14 September 2012)
76. MMC: letter to ComReg “Multi-Band Spectrum Award – Adjustment to the auction timetable” (letter dated 18 September 2012)
77. ComReg: letter to MMC “MBSA – Adjustment to the auction timetable” (letter dated 20 September 2012)
78. ComReg: letter to MMC “Confidential – Amendment to ComReg Document 12/52 Information Memorandum (“IM”)” (letter dated 20 September 2012)
79. ComReg: letter to MMC “ComReg’s letter to you of the 14 September 2012” [Redacted] (letter dated 27 September 2012)
80. ComReg: letter to MMC “Updated Bidder Materials for Multi-Band Spectrum Award” (letter dated 3 October 2012)
81. ComReg: letter to MMC “Statement made by Mr Paul Bradley on “*The Last Word with Matt Cooper*”” (letter dated 31 October 2012)
82. MMC: letter to ComReg “Multi-Band Spectrum Award – Alleged breach of confidentiality obligations” (letter dated 1 November 2012)
83. ComReg: letter to MMC “Letter of 1 November 2012” (letter dated 2 November 2012)
84. ComReg: letter to MMC “MBSA – Deposit Call” [Redacted] (letter dated 2 November 2012)
85. MMC: letter to ComReg “Multi-Band Spectrum Auction” [Redacted] (letter dated 6 November 2012)
86. ComReg: letter to MMC “Multi-Band Spectrum Auction” [Redacted] (letter dated 7 November 2012)
87. ComReg: letter to MMC “MBSA – Receipt of Deposit Call” [Redacted] (letter dated 7 November 2012)
88. ComReg: letter to MMC “Meteor’s participation in the MBSA process” (letter dated 15 November 2012)
89. ComReg: letter to MMC “MBSA process” (letter dated 20 November 2012)
90. ComReg: letter to MMC “Return of Surplus Deposit plus Interest Earned” [Redacted] (letter dated 22 November 2012)
91. ComReg: letter to MMC “Return of Additional Interest Earned” [Redacted] (letter dated 30 November 2012)
92. ComReg/MMC: Email exchange between MMC and ComReg “MBSA – next steps” (final email dated 19 November 2012)
93. MMC: email to ComReg “T1 Licences” (email dated 20 November 2012)
94. ComReg: letter to MMC “Multi-Band Spectrum Award” (letter dated 23 November 2012)
95. MMC: email to ComReg “SUF Timing” (email dated 15 November 2012)
96. MMC: letter to ComReg “Multi-Band Spectrum Award – Notification of Lots retained for GSM purposes” (letter dated 28 November 2012)

97. ComReg: letter to MMC “Multi-Band Spectrum Award – Notification of Lots retained for GSM purposes” (letter dated 4 December 2012)
98. ComReg: letter to MMC “End of Assignment Stage and Auction” (letter dated 5 December 2012)
99. ComReg: letter to MMC “Entitlement to apply for a Preparatory and a Liberalised Use Licence” (letter dated 18 December 2012)

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100. ComReg: letter to H3GI “Joint Venture arrangement between Vodafone Ireland Limited and Hutchinson 3G Ireland Limited” (letter dated 13 July 2012)
101. ComReg: letter to H3GI “Bidder Materials and mock auctions for Multi-Band Spectrum Award” [Redacted] (letter dated 26 July 2012)
102. ComReg: letter to H3GI “Deposit” [Redacted] (letter dated 26 July 2012)
103. ComReg: letter to H3GI “MBSA Application Clarifications” [Redacted] (letter dated 8 August 2012)
104. ComReg: letter to H3GI “Review of MBSA Application” [Redacted] (letter dated 24 August 2012)
105. H3GI: letter to ComReg “COMREG DOC. NO. 12/52” (letter dated 4 September 2012)
106. ComReg: letter to H3GI “Letter of the 4th September” (letter dated 12 September 2012)
107. ComReg: letter to H3GI “Multi-Band Spectrum Award – Adjustment to the auction timetable” (letter dated 14 September 2012)
108. H3GI: letter to ComReg “COMREG DOC. NO. 12/52 – POSSIBLE ERROR” (letter dated 13 September 2012)
109. ComReg: letter to H3GI “Letter of 13 September 2012” (letter dated 20 September 2012)
110. ComReg: letter to H3GI “Amendment to ComReg Document 12/52 Information Memorandum (“IM”)” (letter dated 20 September 2012)
111. H3GI: letter to ComReg “COMREG DOC. NO. 12/52 – MOCK AUCTION ASSIGNMENT ROUND OPTIONS” (letter dated 20 September 2012)
112. ComReg: letter to H3GI “Mock Auction Assignment Round Options” (letter dated 26 September 2012)
113. ComReg: letter to H3GI “ComReg’s letter to you of the 14 September 2012” [Redacted] (letter dated 27 September 2012)
114. H3GI: letter to ComReg “COMREG DOC. NO. 12/52” (letter dated 1 October 2012)
115. ComReg: letter to H3GI “Updated Bidder Materials for Multi-Band Spectrum Award” [Redacted] (letter dated 3 October 2012)
116. H3GI: letter to ComReg “COMREG DOC. NO. 12/52” [Redacted] (letter dated 12 October 2012)
117. ComReg: letter to H3GI “Letter of 12 October” (letter dated 12 October 2012)
118. ComReg: letter to H3GI “MBSA –Deposit Call” (letter dated 2 November 2012)
119. ComReg: letter to H3GI “H3GI’s participation in the MBSA process” (letter dated 15 November 2012)
120. H3GI: letter to ComReg “MULTI-BAND SPECTRUM AWARD” (letter dated 15 November 2012)

121. ComReg: letter to H3GI “Multi-Band Spectrum Award” (letter dated 21 November 2012)
122. ComReg: letter to H3GI “MBSA process” (letter dated 20 November 2012)
123. ComReg: letter to H3GI “Return of Surplus Deposit plus Interest Earned” [Redacted] (letter dated 22 November 2012)
124. ComReg: letter to H3GI “End of Assignment Stage and Auction” (letter dated 5 December 2012)
125. H3GI: email to ComReg “MBSA – Preparatory and Test and Trial Licences” (email dated 21 November 2012)
126. ComReg: letter to H3GI “Multi-Band Spectrum Award” (letter dated 23 November 2012)
127. H3GI: letter to ComReg “MULTI-BAND SPECTRUM AWARD” (letter dated 28 November 2012)
128. ComReg: letter to H3GI “MBSA process” (letter dated 4 December 2012)
129. ComReg: letter to H3GI “Entitlement to apply for a Preparatory and a Liberalised Use Licence” (letter dated 18 December 2012)
130. ComReg: letter to H3GI “Correction to Letter of 18 December 2012” (letter dated 3 January 2013)

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131. ComReg: to All Bidders “Dot econ : Downloadable files” (Report dated 14 September 2012)
132. ComReg: to All Bidders “Dot econ Report: Eligibility-reducing relaxed primary bids in ComReg’s multiband auction” (Report dated 20 September 2012)
133. ComReg: to All Bidders “Clarification on Multi-Band Spectrum Auction” (letter dated 3 October 2012)

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134. ComReg: to All Bidders “Dot-econ: WebBidder User Manual for the Irish Multi-Band Spectrum Award” (Manual dated October 2012)
135. ComReg: to All Winning Bidders “Clarification in response to query received by ComReg” (letter dated 28 November 2012)
136. ComReg: letter to DCENR “ComReg’s Multi-Band Spectrum Award (MBSA process)” (letter dated 1 October 2012)
137. DCENR: letter to ComReg “letter of 1 October” (letter dated 16 October 2012)

134. ComReg: to All Bidders “Dot-econ: WebBidder User Manual for the Irish Multi-Band Spectrum Award” (Manual dated October 2012)



WebBidder User Manual for the Irish Multi-Band Spectrum Award

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Version 3.6

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Introduction

This Electronic Auction System (EAS) User Manual describes how to use the WebBidder Auction platform for bidding in the Irish Multi-Band Spectrum Award 2012. It consists of three Sections:

Section A – Navigation and basic functionality

- Subsections A. 1 and A. 2 describe how to log in to WebBidder, and explain the layout and basic functionality of the WebBidder user interface.

Section B – Bidding in the Auction

- The Auction follows a process of sequential steps. All necessary information and forms will appear automatically in the main frame of the interface at the relevant times. The sequence of screens and their functionality is described in Subsection B.1.
- In conjunction with interaction via the main frame of the interface, you can access auxiliary functionality via a control panel, described in Subsection B.2.

Section C – Required system configurations

- To access the WebBidder system your computer(s) needs to meet certain basic system requirements, described in Subsection C. 1.
- Subsections C. 4 and C. 5 provide detailed instructions on how to install the digital certificates required for accessing the EAS, and how to apply the required settings.

Throughout this manual, the terms 'WebBidder system' and 'EAS' are used interchangeably.

Note that, unless the context requires otherwise, any term used in this manual is to be interpreted in accordance with its definition as set out in the Information Memorandum (ComReg Document 12/52, as amended).

Note also that this document implements and forms part of the Auction Rules. In the event of any conflict or inconsistency between this document and the Information Memorandum, the Auction Rules in the Information Memorandum apply.

A previous draft of this EAS User Manual was provided for the mock auctions. This version is provided in advance of the live Auction. ComReg reserves the right to issue an updated version of this manual to Qualified Bidders prior to the start of the Auction.

The "Downloadable files" document and sample files (distributed on 14 September 2012)¹, which describes the files that can be downloaded from the system and their formats, should be read in conjunction with this document.

¹ Note that one modified sample file, "Lots Won" (in three different formats) has been distributed together with this document.

Section A Navigation and basic functionality

A. 1 Access control for WebBidder

To use the WebBidder system you need to authenticate yourself as an authorised user by logging in. To log in you will need the following user-specific credentials, which will have been provided in the cover letter accompanying this document:

- **Address** (URL) of your web interface on the Auction server.
- **Digital certificates** – a user-specific client certificate and a root certificate to establish the trust relationship between the server and the client. These certificates need to be installed on the computer used to access the interface.
- **Password** (case-sensitive), required for logging into the EAS once you have accessed the login screen for your web interface.

You can log in to WebBidder from any number of computers² (provided they have the digital certificates installed), but you can only have a single WebBidder session open at any one time. You will see a “Parallel login attempt” message if you try to log in to WebBidder while another session is already open.

When you are not using the WebBidder system you should ensure you are logged out if you leave your computer unattended, in order to keep your account secure.

If the WebBidder client (which runs in your web browser) loses its connection with the Auction server (for example if you close your web browser without having logged out or if your Internet connection is interrupted), your session will be terminated and you will be logged out automatically after approximately 90 seconds. You will then be able to log in again from the same or a different computer (provided that your Internet connection has been restored if necessary). This feature prevents your account from accidentally being locked on an inactive session.

You should not use the back, forward or refresh functionality of your browser, as these may lead to your session being terminated. Where reference is made in this document to manually refreshing certain windows this should be done using the button provided in the WebBidder interface only.

For security reasons, you should not run other web browser sessions to other websites on the same machine while you are connected to the EAS.

a) Logging in

To ensure a successful login to the WebBidder system, please check the following steps have been taken:

- ensure that java is available on your computer (see Section C. 1.4);
- install authentication certificates (see Section C. 5);
- ensure that Java can access the digital certificates (see Section C. 5.3); and

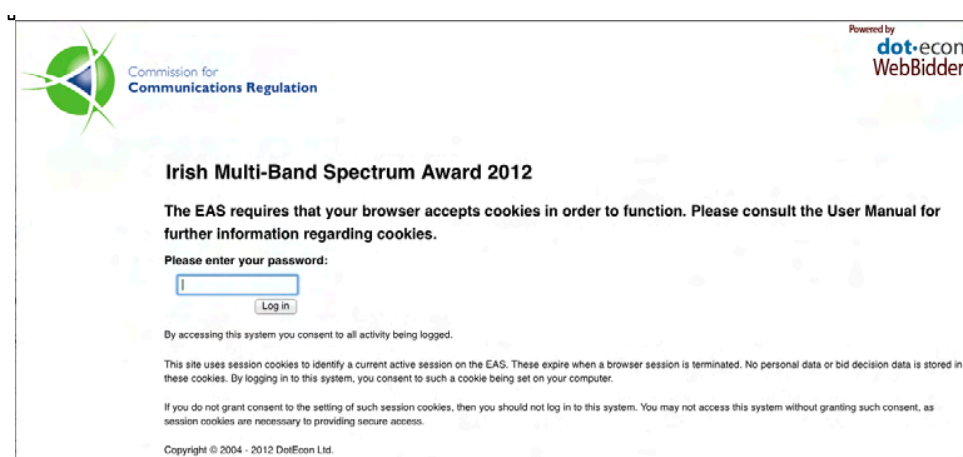
² It is recommended that Bidders have backup facilities for accessing the EAS, including one or more backup computers, backup Internet connection and potentially a backup location for the bid team.

- restrict both the web browser being used and Java to ssl v3.0, with TLS disabled (see Section C. 4).

Having ensured the steps above have been implemented, to log in to WebBidder:³

- enter the address (URL) of the Auction server into your web browser;
- if requested by the browser, select your client certificate;
- if requested by the browser, choose to trust the server certificate;
- enter your password on the login page (shown in Figure 1);
- if requested by Java, select your client certificate; and
- if requested by Java, choose to trust the server certificate.

Figure 1: The login page



The login sequence is only completed when a Java applet that has the functionality of maintaining and monitoring your connection with the server has successfully loaded in your browser and established a connection with the server (the user interface and its components are described in Section A. 2). When you enter your login password, a number of frames will load on your browser window. Some of these frames will display the message "Loading interface..." until the Java applet has successfully established the connection and loaded the contents for these frames. If your Java applet fails to load and establish a connection, then the contents of these frames will not refresh. This is typically a sign of not having Java installed, having it wrongly configured or not having installed the certificates properly so that they can be accessed by the Java Virtual Machine on your computer. If your interface is stuck at this step, please refer to Section C of this manual and ensure you have configured your system correctly.

If you try to log in again after having exited the EAS without logging out (for example after accidentally closing your browser window or temporarily losing your network

³ Whether some of the steps below are necessary depends on your web browser and your browser settings.

connection) you have to wait for approximately 90 seconds for your previous session to be terminated. Until the previous session is terminated automatically, you will receive a "Parallel login attempt" warning when trying to log in.

b) Logging out

Logging out of WebBidder will immediately close your current session. When you have logged out you will be redirected to the login page. All other open WebBidder windows will be closed automatically.

It is advisable to always use the logout button before leaving WebBidder to prevent having to wait for the session to be automatically terminated before being able to log back in.

A.2 The WebBidder user interface

The WebBidder client runs as an application within your web browser. However, you must refrain from using the browser's navigation buttons, such as "Back" and "Refresh". For security reasons, if you try to use browser buttons to navigate WebBidder, your active session may be terminated and you will have to log in again.

Please use only the buttons provided on the WebBidder user interface to navigate within the system.

The WebBidder user interface consists of two main parts, as shown in Figure 2:

- The **control panel** is located to the left of the page and contains the Auction clock at the top, along with various status messages and buttons underneath. The control panel provides access to information and features as described below.
- The **main frame** covers the rest of the page to the right of the control panel. The main frame refreshes automatically when the Auction moves to a new state (for example, when a round starts or closes, or when the Auctioneer notifies round results or schedules a round) and presents you with the relevant information and forms for entering decisions according to the state of the Auction. The general principle of interaction with the main frame is described below, while the individual forms are described in further detail in the relevant sections.

Figure 2: Layout of the WebBidder user interface

The screenshot shows the WebBidder user interface for the Irish Multi-Band Spectrum Award 2012. The interface is divided into a control panel on the left and a main frame on the right.

Control Panel (Left):

- Timer: Thu 30 Aug 2012 12:21:45
- Primary Bid Rounds: Wait for round to be scheduled, No round in progress, No unread messages, Connected to server.
- You are logged in as: Entrant1
- Supplementary Bids editor: Login history, Auction history, Bid history, Messages, View notices, Log out.
- Messages: No messages

Main Frame (Right):

Powered by dot.econ WebBidder. User: Entrant1

Please wait for the Auction to start

Spectrum Caps

Relevant Lot Categories - Cap on spectrum additional to existing holdings	
Time Slice 1 Lots:	2x50MHz
Time Slice 2 Lots:	2x50MHz
Sub-1GHz Lots in Time Slice 1:	2x20MHz
Sub-1GHz lots in Time Slice 2:	2x20MHz
900MHz Lots in Time Slice 1:	2x10MHz

Eligibility

Relevant Lot Categories - Initial Eligibility	
Time Slice 1 Lots:	14
Time Slice 2 Lots:	14

Extensions

Extensions available for the Primary Bid Rounds:
2 x 30 minutes

Summary of Round Prices

Lot Category	Eligibility Points per Lot	Lots available	Time Slice	Aggregate Demand from Applications	Excess Demand from Applications	Reserve Price
(1) 800/1:	2:	6:	1:	8:	Yes:	€2,550,000
(2) 800/2:	2:	6:	2:	8:	Yes:	€8,260,000
(3) 900/1:	2:	5:	1:	6:	Yes:	€2,550,000
(4) 900/2:	2:	7:	2:	8:	Yes:	€8,260,000
(5) 1800/1:	1:	6:	1:	21:	Yes:	€1,270,000
(6) 1800/2:	1:	15:	2:	32:	Yes:	€4,130,000

Export options: CSV | Excel | XML

All inputs and outputs that are *necessary* for Bidders participating in the Auction are displayed on the main frame. Other information and functionality that may be accessed via the control panel is *auxiliary* in nature.

However, the control panel contains the Auction clock, which is a key Java applet that maintains your connection to the server and keeps your session active, and is in charge of updating your main frame. You will not be able to maintain your session if you do not allow for Java to run on your computer. It is advisable to monitor the Auction clock to ensure that it is running at all times.

A. 2.1 The control panel

The control panel consists of the following three sections:

a) Timer applet

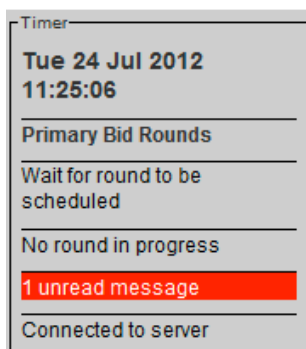
At the top of the control panel, a timer applet (see Figure 3 below) is loaded with the following elements:

- **Auction clock:** Displays a time and date that is synchronised with the clock of the Auction server. Note that the time of the Auction clock may be different from the time shown on your computer. Only the time of the Auction server clock is relevant with regard to the scheduling of rounds.
- **Auction status:** Describes the status of the Auction (e.g. whether the Auction is in the Primary Bid Rounds, the Supplementary Bids Round or the Assignment Round). The status of the current round is also displayed (e.g. whether the round is in progress, in extension or has ended).
- **Timer:** When a round is in progress, the remaining time in the current round is displayed. The background of the timer is colour-coded as follows: *green* when a round is in progress and there is more than 10 minutes left until the scheduled end of the round; *amber* during the last 10 minutes before the scheduled end of a round in progress; *blue* during a round extension (for Bidders who have extended the round⁴), and *red* when the round has expired but results for the round have not been approved by the Auctioneer. During the last minute of each round, the timer emits a beeping sound every second to alert you of the impending end of the round. In this regard, it is important that you ensure that the sound card in your computer(s) is enabled and at an audible volume if you wish to hear the sound alerts. Between rounds, this field will simply display the message "No round in progress".
- **Message status:** Shows the number of unread messages from the Auctioneer. If you have one or more unread messages, the message status will have a red background. This field refreshes automatically when new messages are received or when you read previously unread messages.
- **Connection status:** Informs you about the state of your connection to the Auction server. You will receive a warning message if the connection with the server is lost. You should remember that, if your connection to the Auction server is lost, you will be unable to log back in until the system logs you out automatically after

⁴ Note that when a round is in extension, those Bidders who successfully submitted their Bid in time will be informed that the round is in extension via the Auction status section of the timer applet.

approximately 90 seconds. Therefore, if your connection is lost during the last minute of a round, you may be unable to log back in before the end of that round. In that case, an extension will be triggered as long as you have at least one extension remaining and are eligible to bid in the round. See section 3.3.2 below.

Figure 3: The timer applet



b) Buttons available on the control panel

Below the timer applet your user name is displayed, followed by a number of buttons that provide access to various functions and auxiliary information screens (see Figure 4 below).

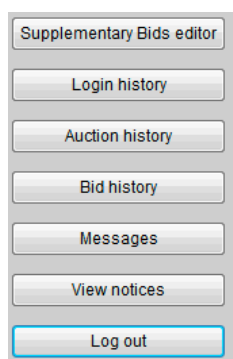
With the exception of the "Log out" button, all buttons open a new browser window. These browser windows will not refresh automatically during the course of the Auction so as to prevent the page from reloading while you are consulting the information on the page or making edits. Therefore, you should refresh these pages manually, using the button provided in the WebBidder system, or re-open them if you wish to view the most recent information. Each button is explained in turn below.

- Supplementary Bids editor:** Clicking on this button will open the Supplementary Bids editor in a new browser window. The editor can be used to build and maintain a provisional list of Supplementary Bids prior to the Supplementary Bids Round and has the same functionality for entering and editing Bids as available in the main frame during the Supplementary Bids Round. It does not provide the option of checking and submitting your list of Supplementary Bids, which is only available from the main interface during the Supplementary Bids Round. The functionality for entering and editing Bids using the Supplementary Bids editor is described in further detail in Section B. 1.3.2. In addition, this page will indicate, for each package of Lots in your list of provisional Supplementary Bids, whether a Relaxed Primary Bid is possible given the Round Prices set for the current Primary Bid Round. This page does not update automatically, in order to prevent loss of data in the event that you are in the process of editing your list of Bids. In order to view up-to-date information, including all Bids submitted and approved by the Auctioneer up to that point and current Round Prices, please manually refresh or reopen this page. This provisional editor is available until the moment at which the Supplementary Bids Round is scheduled – once the Supplementary Bids Round has been scheduled you will need to wait for the start of the Supplementary Bids

Round and carry out any further edits using the editor that will be provided in your main frame.

- **Login history:** Records of all attempts (successful or not) to log into your user account, and logouts (manual or automatic) including IP address of login attempt.
- **Auction history:** Displays a summary of results of all previously completed rounds approved and released by the Auctioneer.
- **Bid history:** Displays a summary of your Application Bid and all the Bids that you submitted in all previously completed rounds approved and released by the Auctioneer. Note that in the Bid History page, Primary Bids are shown on a white background, while Chain Bids are shown on a shaded (grey) background. In order to identify the order in which Chain Bids have been required, the Bidder should refer to the information about the Relative Caps and Constraining Packages available from the Supplementary Bids editor.
- **Messages:** Opens a new browser window showing a list of all messages sent by the Auctioneer. The window will contain a list of all messages received by the Auctioneer (which is also shown in the message list at the bottom of the control panel) and a message reading pane at the right hand side, where you can view the message you select from the list. The messages window needs to be refreshed manually to check for new messages (however, note that you will be alerted of new messages on the timer applet (unread messages will be notified by text and highlighted in red) and on the message list available in the control panel). The communication functionality in the WebBidder system is one-way; Bidders cannot send messages to the Auctioneer through the EAS.
- **View notices:** Displays all notices issued to you by the Auctioneer. This also includes the automatically generated notices, such as notifications of Round Schedules and round results, and additional notices sent by the Auctioneer that will appear on your main frame until acknowledged. Note that although this page does not refresh automatically, notices are displayed on your main frame when they are made.
- **Log out:** Log out of WebBidder, to close your current session and return to the login page.

Figure 4: Buttons available on the control panel



c) Messages from the Auctioneer

Underneath the buttons at the bottom of the control panel there is a list of links that open individual messages from the Auctioneer in a new window (see Figure 5 below). These are listed in chronological order with the most recent at the top. Unlike the list of messages shown in the pop-up window accessible through the “Messages” button in the control panel, this list will update automatically when you receive new messages or read previously unread messages.

Figure 5: Messages list on the control panel



A. 2.2 The main frame

a) Information and forms provided in the main frame

The main frame refreshes automatically during the course of the Auction. Depending on the state of the Auction (e.g. whether a round has been scheduled, is in progress, closed or had its results approved by the Auctioneer), it will display one of two types of screen:

- **Information screens** present you with information about Round Schedules, round results or the Bid you submitted in a round. No user input is required on these screens.
- **Forms** for entering your decisions to the system, such as Bids. Submitting any decisions in WebBidder requires a two-step process, as described below.

Note that your user name (the name of the Bidder on behalf of which you are bidding) will always be displayed at the top right of the main frame. This is to verify your identity in the case of screen shots being taken or screens being printed.

b) Submitting a decision in WebBidder

Any decision that you are asked to make during the Auction will need to be checked for validity and then submitted:

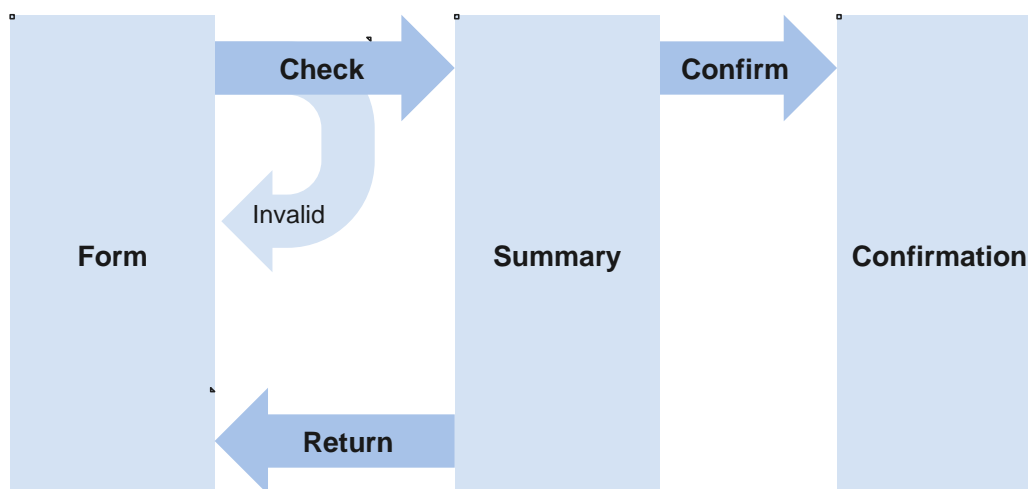
- Enter your decision in the form presented and submit the form to the Auction server using the ‘Check’ button provided.
- The Auction server will then check your decision against the Auction Rules, and your interface will load a form displaying the decision entered and any applicable warnings or errors in relation to your decision, and:
 - a) If your decision is not valid, you will be informed of the reasons for this; you will then (provided the timeframe for submitting a decision has

not ended) have the opportunity to modify your decision before checking it again.

- b) If your decision is valid, you will be able to submit your decision using the 'Submit' button provided. Alternatively you can 'return' to the Bid form to change your decision.

Confirmed decisions are final and can no longer be edited or withdrawn.

Figure 6: Schematic illustration of submitting a decision in WebBidder.



The decision is entered in a form and 'checked'. Invalid decisions are rejected and need to be amended in the form. For valid decisions a summary is displayed, allowing you to confirm that you wish to 'submit' the decision, or to 'return' to the form to modify the decision.

c) Notices from the Auctioneer

The auctioneer can manually send notices to Bidders, in addition to the automated notifications of Round Prices, Round Schedule and Round Results, through the EAS. Notices manually sent by the Auctioneer will appear at the top of the main interface, until you acknowledge them. Once you have acknowledged a notice it will not appear on your main frame, but will still be accessible through the 'View notices' button in the control panel.

Figure 7: Notices from the Auctioneer displayed on your main frame

The screenshot shows the main interface of the Irish Multi-Band Spectrum Award 2012. At the top, it features the Commission for Communications Regulation logo and the title 'Irish Multi-Band Spectrum Award 2012', powered by dot.econ WebBidder. The user is identified as 'Entrant1'.

On the left, a control panel displays the current time as 'Thu 30 Aug 2012 12:28:10'. It indicates that 'Primary Bid Rounds' are 'Wait for round to be scheduled', with 'No round in progress' and 'No unread messages'. Below this, it shows the user is logged in as 'Entrant1' and provides buttons for 'Supplementary Bids editor', 'Login history', 'Auction history', 'Bid history', 'Messages', 'View notices', and 'Log out'. A 'Messages' section shows 'No messages'.

The main content area displays a 'Notice from ComReg' sent on 30 August 2012 at 12:25. The notice content is a dashed box containing the text 'Example notice.' and an 'Acknowledge notice' button.

Below the notice, a large heading reads 'Please wait for the Auction to start'. Underneath, a 'Spectrum Caps' table is shown:

Relevant Lot Categories	Cap on spectrum additional to existing holdings
Time Slice 1 Lots	2x50MHz
Time Slice 2 Lots	2x50MHz
Sub-1GHz Lots in Time Slice 1	2x20MHz
Sub-1GHz lots in Time Slice 2	2x20MHz
900MHz Lots in Time Slice 1	2x10MHz

To acknowledge a notice, click on the “Acknowledge notice” button. The notice will then cease to be displayed on your main interface. You may then access notices previously acknowledged by clicking the “View notices” button available from the control panel.

If the end time of a round is rescheduled while the round is in progress, you will be notified via a notice of the revised Round Schedule. This notice will remain visible until you have acknowledged it by clicking on the “Acknowledge notice” button. However, the original Round Schedule shown in the main frame will **not** be updated until your page has been refreshed (either by you checking or submitting a form or if you log out and log back in again).

Section B Bidding in the Auction

B. 1 The Bidder interface: Main frame

Participation in the Auction is primarily via the main frame:

- All necessary information is displayed on the main frame in a series of tables.
- All inputs required from you are entered on the main frame.

The main frame is refreshed automatically to display the relevant information and forms, according to the state of the Auction. The main frame also displays your user name at the top of the frame, so that it is visible in any screenshots you may wish to take for your own records.

B. 1.1 Before the Auction

Before the start of the Auction a message on your main frame will instruct you to *wait for the Auction to start*. Other information presented includes your Initial Eligibility as well as a summary of the available Lots, their respective Eligibility and Reserve Prices. No action is required at this point.

B. 1.2 The Primary Bid Rounds

B. 1.2.1 Before a round

When a round is scheduled, the main frame is automatically refreshed to display the Round Schedule and the following information in a series of tables:

- Your Eligibility for the round scheduled;
- The Spectrum Caps applicable to your Bids;
- The number of extensions you have left for the Primary Bid Rounds; and
- For each Lot Category, information on:⁵
 - The aggregate demand from the Bids received in the previous round;
 - Eligibility per Lot;
 - Whether there was excess demand for that Lot Category in the previous round (indicated by a 'yes/no' field; in addition, Lot Categories with excess demand will be highlighted in red font);
 - The number of Lots in that Lot Category that you included in the Bid submitted in the previous round (Lot Categories bid for in the previous round will be highlighted with a yellow shaded background); and

⁵ In the first Primary Bid Round, the information about the previous round (including aggregate demand, whether there was excess demand and your Bid in the previous round) relates to the Bids made on Application (the "initial round").

- The Round Price for Lots in that Lot Category set for the round scheduled (for the first round this is simply the Reserve Price per Lot in the Lot Category plus one Price Increment for Lot Categories that had Excess Demand from Applications) and for the previous Round.

Note that, in accordance with the Auction Rules, the round schedule and prices in the live Auction will be notified to Bidders at least 15 minutes in advance of the start of the round.

This Round Price information is also available for download in a number of formats by clicking on the appropriate export option at the bottom of the table providing the information on screen. Round Prices are available for download from the moment at which the round is scheduled until the start of that round; after this point, you can manually copy them from the Bid form.

Please refer to the “Downloadable files” document for more information on the content and format of the downloadable files at each stage of the Auction.

No action is required from Bidders at this point.

Figure 8: Information once a Primary Bid Round has been scheduled

The screenshot displays the 'Irish Multi-Band Spectrum Award 2012' web interface. The main content area is titled 'Wait for round 2 to start' and includes the following sections:

- Summary of Round Schedule:** Round: 2, Start time: 30 August 2012 13:05 BST, Duration: 1 hour, End time: 30 August 2012 14:05 BST.
- Eligibility:** Relevant Lot Categories: Eligibility to bid in round 2. Time Slice 1 Lots: 8, Time Slice 2 Lots: 9.
- Spectrum Caps:** Relevant Lot Categories: Cap on spectrum additional to existing holdings. Time Slice 1 Lots: 2x50MHz, Time Slice 2 Lots: 2x50MHz, Sub-1GHz Lots in Time Slice 1: 2x20MHz, Sub-1GHz lots in Time Slice 2: 2x20MHz, 900MHz Lots in Time Slice 1: 2x10MHz.
- Extensions:** Extensions available for the Primary Bid Rounds: 2 x 30 minutes.

At the bottom, a table provides detailed information for various lot categories:

Lot Category	Eligibility Points per Lot	Lots available	Time Slice	Aggregate Demand in round 1	Excess Demand in round 1	Round Price in round 1	Your demand in round 1	Reserve Price	Round Price in round 2
(1) 800/1	2	6	1	8	Yes	€2,550,000	1	€2,550,000	€2,805,000
(2) 800/2	2	6	2	10	Yes	€8,260,000	2	€8,260,000	€9,086,000
(3) 900/1	2	5	1	8	Yes	€2,550,000	2	€2,550,000	€2,805,000
(4) 900/2	2	7	2	10	Yes	€8,260,000	2	€8,260,000	€9,086,000
(5) 1800/1	1	6	1	11	Yes	€1,270,000	2	€1,270,000	€1,397,000
(6) 1800/2	1	15	2	13	No	€4,130,000	1	€4,130,000	€4,130,000

Export options: CSV | Excel | XML

B. 1.2.2 During a round

When a round begins, the main frame will be automatically refreshed to provide the Bid form, containing the necessary information and inputs for specifying the Primary Bid to be submitted in the round.

a) Information available

When a round has started, the main frame will display that *Round X is in progress*, along with the following information in a series of tables:

- your Eligibility for the current round, and the Eligibility associated with the Primary Bid selected in the form;
- the Spectrum Caps applicable to your Bids; and
- the number of extensions you have left for the Primary Bid Rounds.

The EAS will also alert you (both by means of an alert on your main frame and by an indicator column in your Supplementary Bids editor accessible from the control panel) about the possibility to submit a Relaxed Primary Bid for any of the packages in your list of provisional Supplementary Bids (discussed in greater detail in Section B. 2.1).

b) Bid decision

The Bid form also includes a table (hereafter the 'Bid decision table'), which contains the list of available Lot Categories and information regarding the Lots, such as the Eligibility associated with each Lot and the Round Price of each Lot Category. Lot Categories that had excess demand following Bids in the previous round will be highlighted in red font.

The functionality for downloading Round Prices is disabled when the round is in progress in order to avoid interference with the submission of forms. However, you can manually copy the information.

A Bid is made by selecting the number of Lots in each Lot Category that will be included in the package to which the Bid relates. The Lots must be selected using an interactive form embedded in the Bid decision table. The Bid Amount associated with the Bid will then be automatically calculated within the Bid form using the respective Round Prices of the Lots selected.

After the first Primary Bid Round, the Bid decision table will load the package you bid for in the previous round by default. When the number of Lots selected in a Lot Category is modified, the Bid decision table will automatically update the activity associated with the selected package, as well as calculate the expenditure on each Lot Category.

Figure 9: Bid form

Irish Multi-Band Spectrum Award 2012 Powered by **dot-econ WebBidder**

Thu 30 Aug 2012 12:55:57
 Primary Bid Rounds
 In round
 No decision checked
 Time left: 1h, 00m, 13s
 No unread messages
 Connected to server

Round 2 in progress

Summary of Round Schedule
 Round: 2
 Start time: 30 August 2012 12:54 BST
 Duration: 1 hour 11 minutes
 End time: 30 August 2012 14:05 BST

Eligibility

Relevant Lot Categories	Eligibility to bid in round 2	Eligibility associated with Bid
Time Slice 1 Lots:	8	8
Time Slice 2 Lots:	9	9

Spectrum Caps

Relevant Lot Categories	Cap on spectrum additional to existing holdings	Spectrum (additional to existing holdings) in selected package
Time Slice 1 Lots:	2x50MHz	2x25MHz
Time Slice 2 Lots:	2x50MHz	2x25MHz
Sub-1GHz Lots in Time Slice 1:	2x20MHz	2x15MHz
Sub-1GHz Lots in Time Slice 2:	2x20MHz	2x20MHz
900MHz Lots in Time Slice 1:	2x10MHz	2x10MHz

Extensions

Extensions available for the Primary Bid Rounds
 2 x 30 minutes

Lot Category	Eligibility Points per Lot	Lots available	Time Slice	Reserve Price	Round Price in round 2	Your demand in round 2	Eligibility by Lot Category	Expenditure by Lot Category
(1) 800T	2	6	1	€2,550,000	€2,805,000	1 2	2	€2,805,000
(2) 800Z	2	6	2	€8,260,000	€9,086,000	2 4	4	€18,172,000
(3) 900T	2	5	1	€2,550,000	€2,805,000	2 1	4	€5,610,000
(4) 900Z	2	7	2	€8,260,000	€9,086,000	2 1	4	€18,172,000
(5) 1800T	1	6	1	€1,270,000	€1,397,000	2 1	2	€2,794,000
(6) 1800Z	1	15	2	€4,130,000	€4,130,000	0 1	1	€4,130,000

Bid Amount: €51,683,000

Reset Check

The total Bid Amount associated with the package of Lots selected is presented directly below the Bid decision table.

Clicking on the "Reset" button will reset the package of Lots selected in the Bid decision table to the package that was populated by default when the Bid form was initially loaded.

Once you have entered the Bid decision, you can click on the "Check" button to check the validity of the Bid. Bidding for a package of Lots with activity lower than your Eligibility in the round in any of the Time Slices will trigger a warning message when the Bid is checked, alerting you that the Bid decision will result in a loss of Eligibility in that Time Slice for the following rounds (and the application of Relative Caps).

i) Relaxed Primary Bids

In certain cases, a Bidder may be able to submit a Bid for a package of Lots with an associated Eligibility greater than the Bidder's current Eligibility (a 'Relaxed Primary Bid'). In such a case, the EAS will alert the Bidder to the possibility of submitting a Relaxed Primary Bid for any of the packages of Lots that the Bidder included in its list

of provisional Supplementary Bids⁶ (see Section B. 2.1 for details on how to add packages in your list of provisional Supplementary Bids):

- at the top of your main frame you will see a message alerting you that it is possible to submit a Relaxed Primary Bid for one of the packages of Lots in your list of provisional Supplementary Bids;
- you can then open your Supplementary Bids editor, where you will find a 'yes/no' flag indicating whether a Relaxed Primary Bid is possible for each one of the packages in your list of provisional Supplementary Bids (please note that this information requires up-to-date information about Round Prices, hence you should ensure that the Supplementary Bids editor is refreshed to reflect information about current Round Prices – see Section B. 2.1 for details).

Figure 10: Main frame alert that a Relaxed Primary Bid for a package included in your list of provisional Supplementary Bids is possible

The screenshot shows the main frame of the Irish Multi-Band Spectrum Award 2012 web interface. At the top, it says 'Irish Multi-Band Spectrum Award 2012' and 'Powered by dot.econ WebBidder'. The main content area is titled 'Round 2 in progress' and features a prominent alert: 'RELAXED PRIMARY BID OPTION ALERT: You have packages in your list of provisional Supplementary Bids for which you may submit a Relaxed Primary Bid this round.' Below this, there is a 'Summary of Round Schedule' section with details on the round number, start and end times, and duration. An 'Eligibility' section follows, containing a table with columns for 'Relevant Lot Categories', 'Eligibility to bid in round 2', and 'Eligibility associated with Bid'. The 'Spectrum Caps' section contains another table with columns for 'Relevant Lot Categories', 'Cap on spectrum additional to existing holdings', and 'Spectrum (additional to existing holdings) in selected package'. On the left side, there is a sidebar with navigation links like 'Supplementary Bids editor', 'Login history', and 'Messages', along with a 'Messages' section showing recent alerts.

Relevant Lot Categories	Eligibility to bid in round 2	Eligibility associated with Bid
Time Slice 1 Lots :	8 :	8
Time Slice 2 Lots :	9 :	9

Relevant Lot Categories	Cap on spectrum additional to existing holdings	Spectrum (additional to existing holdings) in selected package
Time Slice 1 Lots :	2x50MHz :	2x25MHz
Time Slice 2 Lots :	2x50MHz :	2x25MHz
Sub-1GHz Lots in Time Slice 1 :	2x20MHz :	2x15MHz
Sub-1GHz lots in Time Slice 2 :	2x20MHz :	2x20MHz
900MHz Lots in Time Slice 1 :	2x10MHz :	2x10MHz

If you select a package of Lots that exceeds your current Eligibility in any of the Time Slices in order to make a Relaxed Primary Bid, a message will appear below the "Bid Amount" field, identifying:

⁶ Note that notifications are only provided for packages of Lots that are included in the list of provisional Supplementary Bids; however, you may still be able to make a Relaxed Primary Bid for other packages of Lots. You are encouraged to maintain a list of provisional Supplementary Bids with all packages you may wish to bid on so that the EAS alerts you of the possibility of submitting a Relaxed Primary Bid on any of these where relevant.

- the Bid Amounts for Constraining Packages that would be required for submitting such a Primary Bid;
- any Chain Bids that would be required for any of the Constraining Packages; and
- whether submitting the Relaxed Primary Bid for the package selected is possible under the activity rules detailed in the IM. (Note that it is not possible to make a Relaxed Primary Bid for a package with associated Eligibility greater than the Bidder's Initial Eligibility.).

This information is presented in a table, which identifies the Constraining Packages that limit the Bid Amount you may submit for the package of Lots you have selected in the Bid form. If the Relaxed Primary Bid is possible, the table will include all the Constraining Packages that limit (directly or through a chain of Relative Caps) the Bid Amount you may submit for the package of Lots you have selected. If the Relaxed Primary Bid is not possible, the identification of Constraining Packages will stop as soon as a package of Lots for which it is not possible to submit a required Chain Bid is found – this would be the case when the Bid Amount required for any Constraining Package exceeds the Round Price of the package.

For each one of the packages in this table, the following information is provided:

- the Constraining Package;
- the Bid Amount that would be required for the Constraining Package so that the Relaxed Primary Bid is consistent with the Relative Caps that result from your earlier Primary Bids;
- the highest Bid Amount you have already submitted for the Constraining Package (please note that provisional Supplementary Bid Amounts have not been submitted at this stage, so this will only take into account any previous Primary or Chain Bids you may have submitted for the package);
- the price of this package of Lots given current Round Prices; and
- a 'true/false' flag indicating whether a Chain Bid would be required for this Constraining Package along with the Relaxed Primary Bid.

The rows in which the necessary Bid Amounts for Constraining Packages are displayed are colour-coded as follows:

- if it is not necessary to submit a Chain Bid for this package, then the row will have a green background colour, and the last column ("Requires Chain Bid") will be set to "false". This is the case when you have already submitted a Bid for the Constraining Package that meets or exceeds the minimum Bid Amount required in order for the Relaxed Primary Bid to be consistent with the Relative Caps. In this case, the Bidder will be able to submit the Relaxed Primary Bid and no further checks are required;
- if a Chain Bid for this package is required and possible, then the row will have a white background colour, and the last column ("Requires Chain Bid") will be set to "true". Further checks on whether additional Chain Bids are required in order to be able to submit this Chain Bid may be required;
- if a Chain Bid is required for this package, but it is not possible to submit the Chain Bid (when the Bid Amount exceeds the price of the package

given current Round Prices), then the row has a light red background colour, and the last column (“Requires Chain Bid”) will be set to “true”. In this case, it is not possible to submit the Relaxed Primary Bid.

If all the Chain Bids identified (if any) require a Bid Amount that does not exceed the price of the package of Lots they relate to at current Round Prices, then the Relaxed Primary Bid is valid. In order to submit the Relaxed Primary Bid you will need to tick the “Submit Chain Bids along with Relaxed Primary Bid” check-box confirmation that will be loaded on the interface after the Bid has been checked by the Auction server against the Auction Rules for validity. If you do not agree to submit any necessary Chain Bids, then the EAS will not allow you to submit the Relaxed Primary Bid. For the avoidance of doubt, by submitting a Relaxed Primary Bid you are agreeing to submit any required Chain Bids, as identified by the EAS.

Figure 11: Selection of a valid Relaxed Primary Bid

Lot Category	Eligibility Points per Lot	Lots available	Time Slice	Reserve Price	Round Price in round 2	Your demand in round 2	Eligibility by Lot Category	Expenditure by Lot Category
(1) 800/1	2	6	1	€2,550,000	€2,805,000	1	2	€2,805,000
(2) 800/2	2	6	2	€8,260,000	€9,086,000	2	4	€18,172,000
(3) 900/1	2	5	1	€2,550,000	€2,805,000	2	4	€5,610,000
(4) 900/2	2	7	2	€8,260,000	€9,086,000	2	4	€18,172,000
(5) 1800/1	1	6	1	€1,270,000	€1,397,000	2	2	€2,794,000
(6) 1800/2	1	15	2	€4,130,000	€4,130,000	2	2	€8,260,000

Bid Amount: €55,813,000

- The package selected in your bidform exceeds your current Eligibility. Given the Relative Caps that result from your reductions of Eligibility in previous rounds, the following Bids for Constraining Packages would be required in order to be able to submit this Relaxed Primary Bid.

Summary of minimum Bids for Constraining Packages required and Chain Bids

Package ID	(1) 800/1	(2) 800/2	(3) 900/1	(4) 900/2	(5) 1800/1	(6) 1800/2	Highest Bid Amount	Price of package in current round	Required Bid Amount	Requires Chain Bid
11	1	2	2	2	2	1	€47,360,000	51,683,000	51,683,000	true

Reset Check

Figure 12: Selection of an invalid Relaxed Primary Bid

Lot Category	Eligibility Points per Lot	Lots available	Time Slice	Reserve Price	Round Price in round 2	Your demand in round 2	Eligibility by Lot Category	Expenditure by Lot Category
(1) 800/1	2	6	1	€2,550,000	€2,805,000	1	2	€2,805,000
(2) 800/2	2	6	2	€8,260,000	€9,086,000	2	4	€18,172,000
(3) 900/1	2	5	1	€2,550,000	€2,805,000	2	4	€5,610,000
(4) 900/2	2	7	2	€8,260,000	€9,086,000	2	4	€18,172,000
(5) 1800/1	1	6	1	€1,270,000	€1,397,000	3	3	€4,191,000
(6) 1800/2	1	15	2	€4,130,000	€4,130,000	1	1	€4,130,000

Bid Amount: €53,080,000

There are errors

- The package selected in your bidform exceeds your current eligibility. Given the Relative Caps that result from your reductions of Eligibility in previous rounds, you cannot submit a Relaxed Primary Bid for this package, as some of the Bids for Constraining Packages that would be required in order to be able to submit this Relaxed Primary Bid are not compatible with the Relative Caps.

Summary of minimum Bids for Constraining Packages required and Chain Bids

Package ID	(1) 800/1	(2) 800/2	(3) 900/1	(4) 900/2	(5) 1800/1	(6) 1800/2	Highest Bid Amount	Price of package in current round	Required Bid Amount	Requires Chain Bid
11	1	2	2	2	2	1	€47,360,000	51,683,000	51,810,000	true

Check

Reset

ii) The Zero Bid

If you wish to submit a Zero Bid, which will result in your Eligibility dropping to zero in both Time Slices for the following rounds, you should select zero Lots in each Lot Category in the Bid form, and then check and submit this Bid. If a Zero Bid is entered, the Bidder cannot make any further Bids in any subsequent Primary Bid Rounds.

iii) Valid Bids

If the Bid decision checked is valid, a message on the main frame will be displayed indicating that this is the case.

A summary of the Bid(s) checked will be provided. Lot Categories that have been included in the package of Lots to which the checked Bid relates will be highlighted with a yellow shaded background.

If the Bid you have checked has an activity that is lower than your Eligibility in the round in any of the Time Slices, you will be shown a warning message alerting you that submitting this Bid will result in a loss of Eligibility in that Time Slice for the following rounds (and the application of Relative Caps).

Figure 13: Summary after checking a valid Primary Bid, with warning about loss of Eligibility

The screenshot displays the user interface for the Irish Multi-Band Spectrum Award 2012. The page is titled "Round 2 in progress" and shows a warning about eligibility reduction. The user is logged in as "Entrant1".

Primary Bid Rounds

- In round
- Valid decision checked
- Time left: 59m: 51s
- No unread messages
- Connected to server

You are logged in as: Entrant1

Supplementary Bids editor
Login history
Auction history
Bid history
Messages
View notices
Log out

Messages:

[30 Aug 12:47 - Example message 2](#)
[30 Aug 12:47 - Example message 1](#)

Round 2 in progress

- You have checked a decision for round 2.
- ELIGIBILITY REDUCTION WARNING:** You have selected a package with an associated Eligibility that is smaller than your Eligibility for Time Slice 2 Lots in this round. If you submit a Primary Bid for this package in this round, this will result in a reduction of Eligibility to bid on Time Slice 2 Lots for the next round to 8. A reduction in Eligibility in this round will establish the corresponding Relative Caps for other packages, in accordance with the activity rules.

Summary of Round Schedule

Round: 2
Start time: 30 August 2012 12:54 BST
Duration: 1 hour 11 minutes
End time: 30 August 2012 14:05 BST

Eligibility

Relevant Lot Categories	Eligibility to bid in round 2	Eligibility associated with Bid	Eligibility to bid in round 3
Time Slice 1 Lots	8	8	8
Time Slice 2 Lots	9	8	8

Spectrum Caps

Relevant Lot Categories	Cap on spectrum additional to existing holdings	Spectrum (additional to existing holdings) in selected package
Time Slice 1 Lots	2x50MHz	2x25MHz
Time Slice 2 Lots	2x50MHz	2x20MHz
Sub-1GHz Lots in Time Slice 1	2x20MHz	2x15MHz
Sub-1GHz lots in Time Slice 2	2x20MHz	2x20MHz
900MHz Lots in Time Slice 1	2x10MHz	2x10MHz

To submit the Bid(s) checked (the Primary Bid selected and any required Chain Bids), you must click on the "Submit" button. If you are submitting a Relaxed Primary Bid that requires submission of Chain Bids, you will need to agree to submit any required Chain Bids along with your Relaxed Primary Bid by ticking the "Submit Chain Bids along with Relaxed Primary Bid" check-box before clicking on the "Submit" button. Alternatively, you can click on the "Return to Bid form" button located at the bottom left corner of the main frame to return to the Bid form and, if desired, select a different package.

Figure 14: Summary after checking a valid Relaxed Primary Bid

Lot Category	Eligibility Points per Lot	Lots available	Time Slice	Reserve Price	Round Price in round 2	Your demand in round 2	Eligibility by Lot Category	Expenditure by Lot Category
(1) 800/1	2	6	1	€2,550,000	€2,805,000	1	2	€2,805,000
(2) 800/2	2	6	2	€8,260,000	€9,086,000	2	4	€18,172,000
(3) 900/1	2	5	1	€2,550,000	€2,805,000	2	4	€5,610,000
(4) 900/2	2	7	2	€8,260,000	€9,086,000	2	4	€18,172,000
(5) 1800/1	1	6	1	€1,270,000	€1,397,000	2	2	€2,794,000
(6) 1800/2	1	15	2	€4,130,000	€4,130,000	2	2	€8,260,000

Bid Amount: €55,813,000

- You have checked a Relaxed Primary Bid. The Bids required for Constraining Packages and any Chain Bids required in order to submit a Relaxed Primary Bid for this package are summarised below. Please indicate that you wish to submit any necessary Chain Bids by checking the "Submit Chain Bids along with Relaxed Primary Bid" checkbox.

Summary of minimum Bids for Constraining Packages required and Chain Bids

Package ID	(1) 800/1	(2) 800/2	(3) 900/1	(4) 900/2	(5) 1800/1	(6) 1800/2	Highest Bid Amount	Price of package in current round	Required Bid Amount	Requires Chain Bid
11	1	2	2	2	2	1	€47,360,000	51,683,000	51,683,000	true

Submit Chain Bids along with Relaxed Primary Bid

Submit

Return to Bid form

Note that, upon checking your Bid, the Lot Categories for which you have selected a positive number of Lots will be highlighted with a yellow shaded background.

iv) Invalid Bids

If the Bid decision checked is invalid, you will be reverted to the Bid form, which will include a number of relevant error messages at the top of the main frame explaining why the Bid decision is invalid (e.g. the Bid exceeds the Spectrum Cap). You may then (provided that the time for submitting a decision has not ended) amend the Bid decision and check a different decision.

Figure 15: Summary after checking an invalid Primary Bid

Round 1 in progress

- Please enter your Bid for round 1

There are errors

- The spectrum associated with the package you selected exceeds your Spectrum Cap for Time Slice 2 Lots.
- The spectrum associated with the package you selected exceeds your Spectrum Cap for Sub-1GHz lots in Time Slice 2.
- The Eligibility associated with the Bid you selected (18) exceeds your Initial Eligibility (14) for Time Slice 2 Lots.

Summary of Round Schedule

Round: 1
 Start time: 02 October 2012 15:17 BST
 Duration: 30 minutes
 End time: 02 October 2012 15:47 BST

Eligibility

Relevant Lot Categories	Eligibility to bid in round 1	Eligibility associated with Bid
Time Slice 1 Lots :	14 :	14
Time Slice 2 Lots :	14 :	18

Spectrum Caps

Relevant Lot Categories	Cap on spectrum additional to existing holdings	Spectrum (additional to existing holdings) in selected package
Time Slice 1 Lots :	2x50MHz :	2x50MHz
Time Slice 2 Lots	2x50MHz :	2x60MHz
Sub-1 GHz Lots in Time Slice 1 :	2x20MHz :	2x20MHz
Sub-1GHz lots in Time Slice 2	2x20MHz :	2x30MHz
900MHz Lots in Time Slice 1 :	2x10MHz :	2x10MHz

c) After submitting a Bid

After a Bid decision has been submitted, the main frame will display a message to inform you that a Bid has been submitted for the round, along with any applicable warning messages in relation to potential reductions of Eligibility for the following rounds. A table containing a summary of the package bid for is displayed, where rows in which a Bidder has placed a Bid for a lot are highlighted with a yellow shaded background.

Unless ComReg decides to reschedule the end of a round, each round will close at the scheduled end time, even if all Bidders have submitted their Bids before this time. An exception to this is when a round has been extended, in which case the extension period will end as soon as all Bids from Bidders who have extended the round have been received or at the end of the extension period, whichever is earlier.

Figure 16: Summary of Bid submitted

Irish Multi-Band Spectrum Award 2012

Powered by dot-econ WebBidder

User: Entrant2

Time: Thu 30 Aug 2012 14:36:03

Primary Bid Rounds

In round Decision submitted

Time left: 8h, 28m, 57s

No unread messages

Connected to server

You are logged in as: Entrant2

Supplementary Bids editor

Login history

Auction history

Bid history

Messages

View notices

Log out

Messages: No messages

Round 2 in progress

- You have submitted your decision for round 2.
- ELIGIBILITY REDUCTION WARNING:** The Eligibility associated with the Primary Bid you have submitted in this round is smaller than your Eligibility for Time Slice 1 Lots in this round. Your Eligibility to bid on Time Slice 1 Lots for the next round will be reduced to 4. This reduction in Eligibility in this round will establish the corresponding Relative Caps for other packages, in accordance with the activity rules.

Summary of Round Schedule

Round: 2
Start time: 30 August 2012 12:54 BST
Duration: 10 hours 11 minutes
End time: 30 August 2012 23:05 BST

Eligibility

Relevant Lot Categories	Eligibility to bid in round 2	Eligibility associated with Bid	Eligibility to bid in round 3
Time Slice 1 Lots	6	4	4
Time Slice 2 Lots	8	8	8

Spectrum Caps

Relevant Lot Categories	Cap on spectrum additional to existing holdings	Spectrum (additional to existing holdings) in selected package
Time Slice 1 Lots	2x50MHz	2x10MHz
Time Slice 2 Lots	2x50MHz	2x20MHz
Sub-1GHz Lots in Time Slice 1	2x20MHz	2x10MHz
Sub-1GHz lots in Time Slice 2	2x20MHz	2x20MHz
900MHz Lots in Time Slice 1	2x10MHz	2x10MHz

Extensions

Extensions available for the Primary Bid Rounds

2 x 30 minutes

Lot Category	Eligibility Points per Lot	Lots available	Time Slice	Reserve Price	Round Price in round 2	Your demand in round 2	Eligibility by Lot Category	Expenditure by Lot Category
(1) 800/1	2	6	1	€2,550,000	€2,805,000	0	0	€0
(2) 800/2	2	6	2	€8,260,000	€9,086,000	2	4	€18,172,000
(3) 900/1	2	5	1	€2,550,000	€2,805,000	2	4	€5,610,000
(4) 900/2	2	7	2	€8,260,000	€9,086,000	2	4	€18,172,000
(5) 1800/1	1	6	1	€1,270,000	€1,397,000	0	0	€0
(6) 1800/2	1	15	2	€4,130,000	€4,130,000	0	0	€0

Bid Amount: €41,954,000

B. 1.2.3 After the round has ended

After a round closes, the main frame will display a message to inform you that the *round has ended* and instruct you to *wait for the Auctioneer to release results*. No action is required from you at this point.

If you have failed to submit a valid decision within the round (including during any potential extension, described in Section B. 1.6), then the Auction system will default your decision for that round to a Zero Bid. You will then lose all your Eligibility for the following Primary Bid Rounds, and you will not be able to submit any further Primary Bids. However, you may still be able to submit Supplementary Bids in the Supplementary Bids Round.


After the Auctioneer has released the round results your main frame will display a summary of the round results, with the following information:

- your Eligibility for the round just completed, the Eligibility associated with the Bid you submitted in the round just completed, and your Eligibility for the following round;
- the Spectrum Caps applicable to your Bids;
- the extensions you have used in the last round (if any) and the number of extensions you have left for the following Primary Bid Rounds;
- for each Lot Category:
 - the Round Price for Lots in that Lot Category set for the round just ended (for the first round this is simply the Reserve Price per Lot in the Lot Category plus one Price Increment for Lot Categories that had Excess Demand from Applications);
 - the aggregate demand from the Bids received in the previous round;
 - whether there was excess demand for that Lot Category in the previous round (indicated by a 'yes/no' flag; in addition, Lot Categories with excess demand will be highlighted in red font); and
 - the number of Lots in that Lot Category that you included in the Primary Bid submitted in the previous round (Lot Categories bid for in the previous round will be highlighted with a yellow shaded background).

You can download the round results in various file formats by clicking the corresponding links at the bottom of the round results table.

Please refer to the "Downloadable files" document for more information on the content and format of the downloadable files at each stage of the Auction.

Figure 17: Results for a Primary Bid Round



Irish Multi-Band Spectrum Award 2012

Powered by
dot.econ
WebBidder

Timer:
Thu 30 Aug 2012
14:43:59

Primary Bid Rounds

Wait for round to be scheduled

No round in progress

No unread messages

Connected to server

You are logged in as:
Entrant1

Supplementary Bids editor

Login history

Auction history

Bid history

Messages

View notices

Log out

Messages:

[30 Aug 12:47 - Example message 2](#)

[30 Aug 12:47 - Example message 1](#)

Results for round 2

Eligibility

Relevant Lot Categories	Eligibility to bid in round 2	Eligibility associated with Bid	Eligibility to bid in round 3
Time Slice 1 Lots	8	8	8
Time Slice 2 Lots	9	10	9

Spectrum Caps

Relevant Lot Categories	Cap on spectrum additional to existing holdings
Time Slice 1 Lots	2x50MHz
Time Slice 2 Lots	2x50MHz
Sub-1GHz Lots in Time Slice 1	2x20MHz
Sub-1GHz lots in Time Slice 2	2x20MHz
900MHz Lots in Time Slice 1	2x10MHz

Extensions

Extensions available for the Primary Bid Rounds	Extensions used in round 2	Extensions remaining
2 x 30 minutes	None	2 x 30 minutes

Lot Category	Eligibility Points per Lot	Lots available	Time Slice	Reserve Price	Round Price in round 2	Your demand in round 2	Eligibility by Lot Category	Expenditure by Lot Category	Aggregate Demand in round 2	Excess Demand in round 2
(1) 800/1	2	6	1	€2,550,000	€2,805,000	1	2	€2,805,000	7	Yes
(2) 800/2	2	6	2	€8,260,000	€9,086,000	2	4	€18,172,000	10	Yes
(3) 900/1	2	5	1	€2,550,000	€2,805,000	2	4	€5,610,000	8	Yes
(4) 900/2	2	7	2	€8,260,000	€9,086,000	2	4	€18,172,000	10	Yes
(5) 1800/1	1	6	1	€1,270,000	€1,397,000	2	2	€2,794,000	11	Yes
(6) 1800/2	1	15	2	€4,130,000	€4,130,000	2	2	€8,260,000	14	No

Export options: [CSV](#) | [Excel](#) | [XML](#)

Bid Amount in round 2: €55,813,000

No action is required from you at this point.

If another round is to follow, the Auction process continues with the release of the Round Schedule for the next round.

B. 1.2.4 End of the Primary Bid Rounds

If there is no more excess demand following the completion of the most recent Primary Bid Round, the main frame will display a message indicating that the Primary Bid Rounds have ended along with the round results.

In exceptional circumstances,⁷ ComReg may also end the Primary Bid Rounds even if there is excess demand for some Lot Categories, in which case the Auction will proceed to the Supplementary Bids Round.

⁷ See paragraph 4.133 of the Information Memorandum, which elaborates on these circumstances.

Figure 18: End of the Primary Bid Rounds

Commission for Communications Regulation
Irish Multi-Band Spectrum Award 2012
Powered by dot:econ WebBidder
User: Entrant1

Timer: Thu 30 Aug 2012 15:01:21

The Primary Bid Rounds ended after 4 rounds

Supplementary Bids Round
Wait for round to be scheduled
No round in progress
No unread messages
Connected to server

You are logged in as: Entrant1

Supplementary Bids editor
Login history
Auction history
Bid history
Messages
View notices
Log out

Messages:
30 Aug 12:47 - Example message 2
30 Aug 12:47 - Example message 1

Eligibility

Relevant Lot Categories	Eligibility to bid in round 4	Eligibility associated with Bid
Time Slice 1 Lots :	7 :	5
Time Slice 2 Lots :	8 :	4

Extensions

Extensions available for the Primary Bid Rounds	Extensions used in round 4
2 x 30 minutes :	1 x 30 minutes

Lot Category	Eligibility Points per Lot	Lots available	Time Slice	Reserve Price	Round Price in round 4	Your demand in round 4	Eligibility by Lot Category	Expenditure by Lot Category	Aggregate Demand in round 4	Excess Demand in round 4
(1) 800/1	2	6	1	€2,550,000	€3,395,000	1	2	€3,395,000	1	No
(2) 800/2	2	6	2	€8,260,000	€10,995,000	1	2	€10,995,000	3	No
(3) 900/1	2	5	1	€2,550,000	€3,395,000	1	2	€3,395,000	2	No
(4) 900/2	2	7	2	€8,260,000	€10,995,000	1	2	€10,995,000	2	No
(5) 1800/1	1	6	1	€1,270,000	€1,691,000	1	1	€1,691,000	4	No
(6) 1800/2	1	15	2	€4,130,000	€4,130,000	0	0	€0	2	No
(7) 900/1/MET	2	2	1	€2,550,000	€3,395,000	0	0	€0	0	No
(8) 1800/1/MET	1	3	1	€1,270,000	€1,691,000	0	0	€0	1	No
(9) 1800/1/TO2	1	3	1	€1,270,000	€1,691,000	0	0	€0	1	No
(10) 1800/1/VOD	1	3	1	€1,270,000	€1,691,000	0	0	€0	1	No

Export options: CSV | Excel | XML

B. 1.3 The Supplementary Bids Round

B. 1.3.1 Before the Supplementary Bids Round

When the Supplementary Bids Round is scheduled, your main frame is automatically refreshed to display the message *Please wait for Supplementary Bids Round to start*, along with a summary of provisional Supplementary Bids.

Your list of provisional Supplementary Bids includes the Bid submitted as part of your Application, all the Primary Bids⁸ and Chain Bids you may have submitted up to this point, along with any provisional Supplementary Bids⁹ you may have added to your list using the Supplementary Bids editor. Each package of Lots is given a 'Package ID' (in the first column of the provisional Supplementary Bids table).¹⁰ Your Final Primary Package is highlighted with a yellow shaded background. The provisional Supplementary Bids for packages that constrain other Supplementary Bids are highlighted with a blue shaded background.

⁸ This includes both 'Standard' and 'Relaxed' Primary Bids

⁹ Note that provisional Supplementary Bids are only stored within the system but have not been submitted. Provisional Supplementary Bids will not be taken into account for the determination of Winners. In order for these Bids to be taken into account you need to check them within the EAS and submit them during the Supplementary Bids Round.

¹⁰ Note that each Bidder has its own ID sequence and these are in no way linked across Bidders.

Figure 19: Summary of provisional Supplementary Bids once the Supplementary Bids Round has been scheduled

The screenshot shows the WebBidder interface for the Irish Multi-Band Spectrum Award 2012. The main heading is "Please wait for the Supplementary Bids Round to start". Below this, the "Summary of Round Schedule" is displayed, showing a start time of 30 August 2012 15:15 BST, a duration of 1 hour, and an end time of 30 August 2012 16:15 BST. The "Summary of provisional Supplementary Bids" table is the central focus, listing various packages with their IDs, time slice eligibility, reserve prices, highest bids, and caps. The table is color-coded by package ID.

Package ID	(1) 800/1	(2) 800/2	(3) 900/1	(4) 900/2	(5) 1800/1	(6) 1800/2	Time Slice 1 Eligibility associated with Bid	Time Slice 2 Eligibility associated with Bid	Package Reserve Price	Highest Bid Amount	Relative Cap	Constraining Package UID	Final Price Cap	Bid Amount
21	1	1	1	1	1	0	5	4	€22,890,000	€30,471,000	Not capped	N/A	Not capped	€30,471,000
18	1	2	2	2	2	2	8	10	€51,490,000	€55,813,000	€55,813,000	11	€65,807,000	€55,813,000
0	2	2	2	2	6	6	14	14	€75,640,000	€75,640,000	€79,963,000	11	€92,486,000	€75,640,000
11	1	2	2	2	2	1	8	9	€47,360,000	€51,683,000	€56,442,000	20	€61,677,000	€51,683,000
20	1	2	2	2	1	0	7	8	€41,960,000	€50,775,000	€55,856,000	21	€55,856,000	€50,775,000

Export options: [CSV](#) | [Excel](#) | [XML](#) | [Bids File](#)

The EAS will provide you with information about the caps that apply to each provisional Supplementary Bid, including both the Relative Cap and the Final Price Cap. For each package of Lots subject to a cap, the package ID is provided to allow you to easily identify what Bids you may need to raise in order to raise the cap. The applicable caps on your Bid for each package in your list of provisional Supplementary Bids are also provided. The caps displayed are calculated based on the Bid Amounts that correspond to the provisional Supplementary Bids on the Constraining Packages. Next to the cap, you will find an "Explain" button; if you click on this button, details on how the cap is calculated will be provided in a pop-up window.

By default, the list of Supplementary Bids is presented with packages ordered by:

- the Constraining Round that defines the Relative Cap on the package: packages that are not subject to a Relative Cap are presented first; thereafter, packages are ordered in ascending order of the Constraining Round; then by
- whether the package is a Constraining Package: within packages for which the Relative Cap is defined in relation to the same Constraining Round, those which are Constraining Packages in relation to other packages are presented first; then by
- the Eligibility of the package in Time Slice 1; and then by
- the Eligibility of the package in Time Slice 2.

This ordering is intended to assist Bidders in managing their Relative Caps, as the Constraining Packages that are subject to a Relative Cap are presented immediately after the packages they constrain. However, Bidders may alternatively sort Supplementary Bids in relation to:

- the package ID;
- the Eligibility of the package in Time Slice 1;
- the Eligibility of the package in Time Slice 2;

- the Reserve Price for the package; or
- the Highest Bid Amount already submitted for the package

by clicking on the relevant column header.

The list of provisional Supplementary Bids is available for download in a number of formats, including a "Bids File" format that is the same format required for uploading a list of Supplementary Bids from a file into the Auction system.

No action is required from you at this point.

Please refer to the "Downloadable files" document for more information on the content and format of the downloadable files at each stage of the Auction.

B. 1.3.2 During the Supplementary Bids Round

When the Supplementary Bids Round begins, your main frame will be automatically refreshed to provide you with the necessary information and inputs for specifying and entering your Supplementary Bids.

The Bid decision table will be presented under the "Summary of Round Schedule" table. As mentioned above, this table will be preloaded with the list of Bids included in your Supplementary Bids editor (hereafter the package list) at the end of the Primary Bid Rounds. If your package list contains any invalid Bids, an error message will appear on your main frame indicating that this is the case. Further, a separate error message for each invalid Bid will be displayed within the Bid decision table itself stating why the Bid is invalid.

a) Managing Bids via the interface

i) Adding a new package

To add a new package via the interface, simply click on the "Add package" button. The main frame will update to present a Bid form table, where you may enter the number of Lots for each Lot Category you want to include in this package.

Add the package you have selected to your list of provisional Supplementary Bids by clicking on the "Check" button.

If you have selected a valid package, a provisional Supplementary Bid for the selected package of Lots at the Reserve Price for that package will then be added to your list. **If the package you have selected already exists in your list, this will trigger an error message informing you that this package is already included in your list.** If you have selected an invalid package, the main frame will display an error message explaining why this package is invalid. You may then select a different package to add to your list of provisional Supplementary Bids as per the process described above, or click on the "Return to Supplementary Bids list" button.

Figure 20: Adding a Bid to your list of Supplementary Bids

Irish Multi-Band Spectrum Award 2012

Powered by **dot-econ WebBidder**

Time: Thu 30 Aug 2012 15:08:55

The Supplementary Bids Round is in progress

Summary of Round Schedule
 Start time: 30 August 2012 15:07 BST
 Duration: 1 hour 8 minutes
 End time: 30 August 2012 16:15 BST

Eligibility

Relevant Lot Categories	Eligibility	Bid Eligibility
Time Slice 1 Lots	14	14
Time Slice 2 Lots	14	14

Spectrum Caps

Relevant Lot Categories	Cap on spectrum additional to existing holdings	Spectrum (additional to existing holdings) in selected package
Time Slice 1 Lots	2x50MHz	2x50MHz
Time Slice 2 Lots	2x50MHz	2x50MHz
Sub-1GHz Lots in Time Slice 1	2x20MHz	2x20MHz
Sub-1GHz lots in Time Slice 2	2x20MHz	2x20MHz
900MHz Lots in Time Slice 1	2x10MHz	2x10MHz

Lot Category	Eligibility Points per Lot	Lots available	Time Slice	Reserve Price	Price in the Supplementary Bids Round	Eligibility by Lot Category	Expenditure by Lot Category
(1) 800/1	2	6	1	€2,550,000	€2,550,000	4	€5,100,000
(2) 800/2	2	6	2	€8,260,000	€8,260,000	4	€16,520,000
(3) 900/1	2	5	1	€2,550,000	€2,550,000	4	€5,100,000
(4) 900/2	2	7	2	€8,260,000	€8,260,000	4	€16,520,000
(5) 1800/1	1	6	1	€1,270,000	€1,270,000	6	€7,620,000
(6) 1800/2	1	15	2	€4,130,000	€4,130,000	6	€24,780,000

Bid Amount: €75,640,000

Return to your list of provisional Supplementary Bids

ii) Modifying the Bid Amount of Supplementary Bids

To modify the Bid Amount of a package via the interface, check the "Modify" check-box within the Supplementary Bids table and set the desired Bid Amount (note that you can modify multiple Bids at the same time), and then click on the "Process edits" button to process your edit(s) and check if they are valid. Note that for the EAS to process your edit(s) you need to submit the form with the "Modify" check-box checked – otherwise the system will ignore this edit (consequently, if you wish to cancel some of your edits, you can simply uncheck this box for the relevant rows in the form).

Figure 21: Modifying Bid Amounts for Supplementary Bids

Irish Multi-Band Spectrum Award 2012

Powered by **dot-econ WebBidder**

Time: Thu 30 Aug 2012 15:13:56

The Supplementary Bids Round is in progress

Summary of Round Schedule
 Start time: 30 August 2012 15:07 BST
 Duration: 1 hour 8 minutes
 End time: 30 August 2012 16:15 BST

Package ID	(1) 800/1	(2) 800/2	(3) 900/1	(4) 900/2	(5) 1800/1	(6) 1800/2	Time Slice 1 Eligibility (with Bid)	Time Slice 2 Eligibility (with Bid)	Package Reserve Price	Highest Bid Amount	Relative Cap	Constraining Package UID	Explain	Final Price Cap	Explain	Modify	Bid Amount	Delete
21	1	1	1	1	1	0	5	4	€22,890,000	€30,471,000	Not capped	N/A	N/A	Not capped	N/A	<input checked="" type="checkbox"/>	€30,471,000	N/A
18	1	2	2	2	2	2	8	10	€51,490,000	€55,813,000	€55,813,000	11	explain	€65,807,000	explain	<input type="checkbox"/>	€55,813,000	N/A
0	2	2	2	2	6	6	14	14	€75,640,000	€75,640,000	€79,963,000	11	explain	€92,486,000	explain	<input type="checkbox"/>	€75,640,000	N/A
11	1	2	2	2	2	1	8	9	€47,360,000	€51,683,000	€56,442,000	20	explain	€61,677,000	explain	<input type="checkbox"/>	€51,683,000	N/A
20	1	2	2	2	1	0	7	8	€41,960,000	€50,775,000	€55,856,000	21	explain	€55,856,000	explain	<input type="checkbox"/>	€50,775,000	N/A

Export options: [CSV](#) [Excel](#) [XML](#) [Bids File](#)

If you enter a Bid Amount below the Reserve Price for the package, or below the highest Bid you have already submitted for that package, the edit for this package will be rejected. You will be given an error message explaining why the package has been rejected.

For each package of Lots subject to a cap, the ID of its Constraining Package and the applicable cap based on the provisional Supplementary Bids entered are shown. Next to the cap, you can find an "Explain" button. Clicking on this button will open a window providing detailed information about how the cap is calculated. There is no cap or "Explain" button for packages that are uncapped. The information relating to the Relative Caps and the Final Price Caps is provided separately, so you can consult each of these separately.

Figure 22: Explanation of the calculation of a Relative Cap

Supplementary Bids editor help

The cap on your Supplementary Bid for package with ID 18, which includes:

- 1 Lot of (1) 800/1
- 2 Lots of (2) 800/2
- 2 Lots of (3) 900/1
- 2 Lots of (4) 900/2
- 2 Lots of (5) 1800/1
- 2 Lots of (6) 1800/2

is calculated as follows.

(Note that if you change your Bid for the Constraining Package - for example by increasing the Bid Amount of your Supplementary Bid for the Constraining Package - then this will affect this cap.)

Cap calculation for package with unique id 18

Constraining Round	The eligibility of this Package is 8 in Time Slice 1 and 10 in Time Slice 2. You were last eligible to bid on this package in round 1 .
Constraining Package	In the Constraining Round, you submitted a Bid for the package (with package ID 11): <ul style="list-style-type: none"> • 1 Lot of (1) 800/1 • 2 Lots of (2) 800/2 • 2 Lots of (3) 900/1 • 2 Lots of (4) 900/2 • 2 Lots of (5) 1800/1 • 1 Lot of (6) 1800/2
Revealed Value Differential for the package	The price of this package in round 1 was €51,490,000 The price of the Constraining Package in round 1 was €47,360,000 Therefore, the Revealed Value Differential is: $RVD = €51,490,000 - €47,360,000 = €4,130,000$
Highest Bid for the Constraining Package	Your provisional highest Bid for the Constraining Package is: Chain Bid of €51,683,000 B = €51,683,000 (NB: Subject to other constraints, you can still change your Supplementary Bid for the Constraining Package)
Cap	The cap is calculated as: $Cap = RVD + B = €4,130,000 + €51,683,000 = €55,813,000$

Figure 23: Explanation of the calculation of a Relative Cap for a package that had its Constraining Round re-set

Supplementary Bids editor help	
The cap on your Supplementary Bid for package with ID 10, which includes:	
<ul style="list-style-type: none"> • 2 Lots of (1) 800/1 • 2 Lots of (2) 800/2 • 2 Lots of (4) 900/2 • 4 Lots of (5) 1800/1 • 4 Lots of (6) 1800/2 	
is calculated as follows.	
(Note that if you change your Bid for the Constraining Package - for example by increasing the Bid Amount of your Supplementary Bid for the Constraining Package - then this will affect this cap.)	
Cap calculation for package with unique id 10	
Constraining Round	The eligibility of this Package is 8 in Time Slice 1 and 12 in Time Slice 2. The Constraining Round for this package has been re-set to round 4.
Constraining Package	In the Constraining Round, you submitted a Bid for the package (with package ID 12): <ul style="list-style-type: none"> • 1 Lot of (3) 900/1 • 1 Lot of (4) 900/2 • 4 Lots of (5) 1800/1 • 4 Lots of (6) 1800/2
Revealed Value Differential for the package	The price of this package in round 4 was €77,526,000 The price of the Constraining Package in round 4 was €41,301,000 Therefore, the Revealed Value Differential is: $RVD = €77,526,000 - €41,301,000 = €36,225,000$
Highest Bid for the Constraining Package	Your provisional highest Bid for the Constraining Package is: Primary Bid of €41,301,000, placed in round 4 $B = €41,301,000$ (NB: Subject to other constraints, you can still change your Supplementary Bid for the Constraining Package)
Cap	The cap is calculated as: $Cap = RVD + B = €36,225,000 + €41,301,000 = €77,526,000$

If you enter a Bid Amount for a package of Lots that exceeds any of the caps for that package, this will trigger an error message when processing Bid edits, informing you that you will need to modify any invalid Bids before you can submit your list of Supplementary Bids. Note that you will not be able to submit your list of Supplementary Bids unless all the Bids in the list are valid. Valid Bid Amounts must be entered in whole €1,000s and all Bid Amounts should be numeric. Any invalid Bids will be acknowledged with an error message.

Figure 24: Supplementary Bids editor - error when cap is exceeded

The Supplementary Bids Round is in progress

- The Bid Amount for package with id 18 has been updated.
- Please enter your decision for the Supplementary Bids Round

There are errors

- You cannot submit a list of Supplementary Bids that contains invalid Bids. Please correct or remove any invalid Bids.

Summary of Round Schedule

Start time: 30 August 2012 15:07 BST
Duration: 1 hour 8 minutes
End time: 30 August 2012 16:15 BST

[Click here for help on using the Supplementary Bids editor](#)

Package ID	(1) 800/1	(2) 800/2	(3) 900/1	(4) 900/2	(5) 1800/1	(6) 1800/2	Time Slice 1 Eligibility associated with Bid	Time Slice 2 Eligibility associated with Bid	Package Reserve Price	Highest Bid Amount	Relative Cap	Constraining Package UID	Explain	Final Price Cap	Explain	Modify	Bid Amount	Delete	
21	1	1	1	1	1	0	5	4	€22,890,000	€30,471,000	Not capped	N/A	N/A	Not capped	N/A	<input type="checkbox"/>	€30,471,000	N/A	
18	1	2	2	2	2	2	8	10	€51,490,000	€55,813,000	€55,813,000	11	explain	€65,807,000	explain	<input type="checkbox"/>	The Bid Amount exceeds the cap	€55,813,000	N/A
0	2	2	2	2	2	6	6	14	€75,640,000	€75,640,000	€79,963,000	11	explain	€92,486,000	explain	<input type="checkbox"/>	€75,640,000	N/A	
11	1	2	2	2	2	1	8	9	€47,360,000	€51,683,000	€56,442,000	20	explain	€61,677,000	explain	<input type="checkbox"/>	€51,683,000	N/A	
20	1	2	2	2	2	1	0	7	€41,960,000	€50,775,000	€55,856,000	21	explain	€55,856,000	explain	<input type="checkbox"/>	€50,775,000	N/A	

Export options: [CSV](#) | [Excel](#) | [XML](#) | [Bids File](#)

If you have checked “Modify” check-boxes but have not changed any of the Bid Amounts, then clicking on the “Process edits” button will trigger an error message informing that no edits have been processed.

iii) Deleting a Bid

To delete a provisional Supplementary Bid from the list, check the “Delete” check-box for the Bid(s) you wish to delete and then click on the “Process edits” button. After your decision to delete packages has been processed, a message at the top of the main frame will inform you of the number of packages deleted. Information relating to deleted bids cannot be recovered, so if you wish to re-enter a Bid you have deleted from your list, you will need to input the Bid again.

Please note that you may not delete any packages of Lots that you have already bid for in previous rounds (including the Bid submitted as part of your Application, all Primary Bids¹¹ and Chain Bids) from your list. The Supplementary Bids for these packages must be at least as high as the highest Bid Amount already submitted for the package.

b) Entering or modifying Bids through a Bids file upload

Supplementary Bids may also be added to the Auction system or modified by uploading a Bids file from your local file system.

Each row in a Bid file constitutes a Bid, and must contain one column for each Lot Category (specifying the number of Lots in that Lot Category included in the package, in the same order as in the provisional Supplementary Bids table) and an additional column for the Bid Amount. Any rows in the Bids file that are not formatted this way

¹¹ This includes both ‘Standard’ and ‘Relaxed’ Primary Bids.

will be ignored by the system. A header row is optional – if the first row contains non-numeric characters, it will be assumed to be a header line and will be ignored.

The Bids file should have the fields delimited as Tab Separated Values, in which case the filename should have the extension “.tsv” or “.txt”. Filenames with no extension or with an extension other than “.tsv” or “.txt” will be rejected by the system.

Figure 25: Example of a Bids File

(1) 800/1	(2) 800/2	(3) 900/1	(4) 900/2	(5) 1800/1	(6) 1800/2	Bid Amount
0	0	2	2	0	0	36266000
0	0	2	4	0	6	95944000
2	2	2	2	5	5	70240000
2	2	2	2	6	6	75640000
2	2	2	2	4	4	98056000
0	0	2	4	0	0	38140000
0	0	2	0	6	6	56396000

You may download your provisional Supplementary Bids from the EAS in the same format that is required for uploading Bids using the download functionality described below. Doing so allows you to get familiar with the format used, edit the Bid Amounts for Bids already in your list, add additional Bids if desired or remove Bids, and upload the amended list.

To upload the Bids file click on the “Choose file” button at the bottom of the main frame, select the Bids file then click on “Upload file” button. If you wish to clear your existing Bids in your list relating to packages of Lots you have not yet bid for and reset **all** the Bid Amounts for packages you have bid for to the highest Bid Amount you have submitted so far for the package, you will need to check the “Clear existing Bids in your list of provisional Supplementary Bids before uploading” check-box before clicking on the “Upload Bids” button.

WebBidder will check that each Bid is valid subject to the Auction Rules. Bids for invalid packages of Lots and Bids with a Bid Amount that is below the Reserve Price for the package or the highest Bid Amount already submitted for the package will be rejected.

Bid Amounts above any applicable cap will be provisionally accepted by the system. However, you will not be allowed to submit your Supplementary Bids unless you edit your Bids to ensure that all Bid Amounts are valid and below any applicable caps.

Upon uploading a Bids file, a list of messages will be shown at the top of the main frame indicating which Bids have been accepted, the Bid Amounts for packages of Lots which were already included in your list that have been updated, and which Bids (if any) are invalid and rejected (these are flagged in an error message).

If you include multiple Bids for the same package in the Bids file you upload, please be aware that **only the first Bid submission will be processed by the system and the subsequent ones will be ignored (which may not be the highest Bid made for this package in the Bids file)**. Rows that are incorrectly formatted will also be ignored by the system. The system will then inform you of any rows in your Bids file that have been ignored.

If you have any invalid Bids, click on the “Continue” button at the bottom left hand corner of your main frame to return to the Bid form to modify your Bids, or alternatively upload an amended Bids file.

If all the Supplementary Bids in your list are valid, the “Check” button at the bottom right hand corner of your main frame will be enabled. You may click on this button to check your Supplementary Bids. Note that although Bidders can add or upload packages to their list of provisional Supplementary Bids via the Supplementary Bids editor prior to the announcement of the Round Schedule for the Supplementary Bids Round, Bidders are only able to ‘Check’ and ‘Submit’ their Supplementary Bids during the Supplementary Bids Round.

c) Downloading your list of provisional Supplementary Bids

Your list of provisional Supplementary Bids may be downloaded in a number of formats by clicking on the appropriate export option. Two main datasets can be downloaded:

- a table containing all the information provided on the screen, including information about the highest Bid already submitted for each package of Lots, the Reserve Price for each package and about applicable caps on the package – this is available in three different formats:
 - Excel (Microsoft Excel format, with extension “.xls”), which can directly be opened in Excel;
 - CSV (Coma Separated Values, UTF-8 encoding and CRLF linebreaks, with extension “.csv”), which can be used for importing into other software tools, or opened in a text editor; and
 - XML (UTF-8 encoding, with extension “.xml”), which can be used for importing into other software tools, or opened in a text editor;
- the “Bids File” format, delimited as a Tab Separated Values (UTF-8 encoding, with the extension “.tsv”), which consists of a stripped down version containing only information about the Lots in each package and the Bid Amount associated with each Bid, using the exact same format that is required for files that can be used to upload Bids to the system – this allows you to simply download the Bids, edit the Bid Amounts, and re-upload them.

Figure 26: Example of a downloaded list of Supplementary Bids, using XLS format

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Package ID	(1) 800/1	(2) 800/2	(3) 900/1	(4) 900/2	(5) 1800/1	(6) 1800/2	Time Slice 1 Eligibility associated with Bid	Time Slice 2 Eligibility associated with Bid	Package Reserve Price	Highest Bid Amount	Relative Cap	Constraining Package UID	Final Price Cap	Bid Amount
21	1	1	1	1	1	0	5	4	22890000	30471000	Not capped	N/A	Not capped	30471000
18	1	2	2	2	2	2	8	10	51490000	55813000	55813000	11	65807000	56813000
0	2	2	2	2	6	6	14	14	75640000	75640000	79963000	11	92486000	75640000
11	1	2	2	2	2	1	8	9	47360000	51683000	56442000	20	61677000	51683000
20	1	2	2	2	1	0	7	8	41960000	50775000	55856000	21	55856000	50775000

d) Checking and submitting your Supplementary Bids

The “Check” button (located below the “Process edits” button) will only be enabled when all the Bids in your list of provisional Supplementary Bids are valid. Click on the “Check” button to check your Supplementary Bids for submission.

You cannot check your decision whilst you have unprocessed edits in your Bid decision table. Clicking on the “Check” button in this situation (for example if you have

a "Delete" or a "Modify" check-box checked which has not been processed) will trigger an error message stating that you cannot check unprocessed edits.

When you have checked a valid list of Supplementary Bids, the main frame will refresh with a message at the top indicating that you have checked a valid decision for the Supplementary Bids Round. The "Submit" button will then be enabled at the bottom right hand corner of your main frame. You may then submit your Supplementary Bids by clicking on the "Submit" button. Otherwise, if you wish to make further changes to your Supplementary Bids, click on the "Return to Bid form" button and you will be directed to the Supplementary Bids editor.

You may only submit one list of Supplementary Bids. Once you have submitted your list of Supplementary Bids you will not be able to:

- modify or withdraw any of the Bids submitted; or
- add any further Supplementary Bids to your submission.

If you have not submitted your Supplementary Bids by the scheduled end of the round, you will trigger an extension period. Extensions for the Supplementary Bids Round work as for the Primary Bid Rounds, with the timer displayed in *blue* during a round extension (for Bidders who have extended the round). Your ability to use an extension for the Supplementary Bids Round is independent of the number of extensions you may have used during the Primary Bid Rounds.

When you have submitted your Supplementary Bids, your main frame will refresh with a message at the top indicating that you have submitted your decision for the Supplementary Bids Round. The list of Supplementary Bids submitted will also be displayed in the main frame.

B. 1.3.3 End of the Supplementary Bids Round

At the end of the Supplementary Bids Round your main frame will automatically update and display a message stating that the round has ended. No action is required from you at this point.

If you have failed to submit your Supplementary Bids within the round (including during any potential extension, described in Section B. 1.6), you will not be able to submit any Supplementary Bids (even if you have checked a valid list of Supplementary Bids but have failed to submit it). Your Primary Bids and Chain Bids will, however, be taken into account when selecting the Winning Bids and determining Base Prices.

When the Auctioneer has released the Main Stage results, your main frame will automatically update again and show you what you have won at the end of the Main Stage. Specifically, you will be shown:

- if one of your Bids has been selected as a Winning Bid, the package of Lots you have won, the Bid Amount for this Bid and the Base Price for your package; and
- if you have not won any Lots a message will be displayed stating that this is the case.

Figure 27: Results of the Main Stage, for a Bidder who has won Lots

Commission for Communications Regulation
Irish Multi-Band Spectrum Award 2012
Powered by dot:econ WebBidder
User: Entrant2

Timer: Thu 30 Aug 2012 15:39:06
Assignment Round
Please wait for the auctioneer to start the stage
No round in progress
No unread messages
Connected to server
You are logged in as: Entrant2

Results of the Main Stage

Main Stage Winning Bids

Bidder name	(1) 800/1	(2) 800/2	(3) 900/1	(4) 900/2	(5) 1800/1	(6) 1800/2	(7) 900/1/MET	(8) 1800/1/MET	(9) 1800/1/TO2	(10) 1800/1/VOD	Bid Amount	Base Price
Entrant2	0	2	2	2	0	0	0	0	0	0	€46,152,000	€38,140,000
Meteor	2	2	0	2	3	6	2	3	0	0	N/A	N/A
Vodafone	2	2	2	2	3	4	0	0	0	2	N/A	N/A

Export options: CSV | Excel | XML

B. 1.4 The Assignment Round

If the Assignment Round is run, then those Bidders who may potentially have conflicting demands on specific frequencies in a band will be able to bid for the alternative frequency ranges that could be assigned to them in accordance with the package of Lots that they have won in the Main Stage, any existing spectrum holdings they maintain, and the assignment rules detailed in the Information Memorandum. Unsuccessful Bidders (who do not have Party-Specific Lots) will be unable to submit any Bids.

Where a Bidder may submit Bids for different assignment options in different bands, these options are presented in a single table, ordered by band and with the first column in the table indicating the band they relate to. Alternative assignment options are presented by providing the frequency ranges that delimit them; the range of blocks for each option will be presented next to the relevant frequencies; for example, the assignment option for the first four blocks in the 800MHz band would be displayed as: "791-811MHz paired with 832-852MHz (blocks A to D)".

Bidders who are able to bid in the Assignment Round may specify the Bid Amount for each assignment option presented to them in each one of the relevant bands. All Bids must be submitted at the same time. Once a Bidder has submitted a decision, the Bidder will not be able to modify or withdraw any of its Bids, and will not be able to submit any additional Bids.

B. 1.4.1 Before the Assignment Round

When the Assignment Round is scheduled, your main frame will automatically refresh to display the Round Schedule along with the message "Please wait for Assignment Round to start". In addition, the main frame will also present a table with the assignment options you may bid for during the Assignment Round.

Bidders will also be reminded that, in accordance with the Auction Rules, it is necessary to assign frequencies to any unliberalised spectrum holdings that Existing GSM Licensees may retain under their current licence conditions. Where applicable, any such licence holders will also be able to bid for their preferred frequency assignment in the Assignment Round.

Figure 28: Information once the Assignment Round has been scheduled

The screenshot displays the WebBidder interface for the Irish Multi-Band Spectrum Award 2012. The page is powered by dot.econ WebBidder. The user is identified as 'Entrant2'. The main message states: 'Please wait for the Assignment Round to start'. Below this, a 'Summary of Round Schedule' is provided, including the start time (30 August 2012 16:00 BST), duration (30 minutes), and end time (30 August 2012 16:30 BST). A table lists the frequency assignments for two time slices. The left sidebar contains navigation links such as 'Login history', 'Auction history', 'Bid history', 'Messages', 'View notices', and 'Log out'. The bottom left shows 'Messages: No messages'.

Timer:
Thu 30 Aug 2012
15:44:02

Assignment Round
Wait for the round to start
No round in progress
No unread messages
Connected to server

You are logged in as:
Entrant2

Login history
Auction history
Bid history
Messages
View notices
Log out

Messages:
No messages

Irish Multi-Band Spectrum Award 2012

Powered by dot.econ WebBidder

User: Entrant2

Please wait for the Assignment Round to start

Summary of Round Schedule

Start time: 30 August 2012 16:00 BST
Duration: 30 minutes
End time: 30 August 2012 16:30 BST

Band	Time slice 1 frequency assignment	Time slice 2 frequency assignment
800MHz	N/A	791-801MHz paired with 832-842MHz (blocks A to B)
		N/A
		801-811MHz paired with 842-852MHz (blocks C to D)
		N/A
		811-821MHz paired with 852-862MHz (blocks E to F)
900MHz	880-890MHz paired with 925-935MHz (blocks A to B)	880-890MHz paired with 925-935MHz (blocks A to B)
	885-895MHz paired with 930-940MHz (blocks B to C)	885-895MHz paired with 930-940MHz (blocks B to C)
	890-900MHz paired with 935-945MHz (blocks C to D)	890-900MHz paired with 935-945MHz (blocks C to D)
	895-905MHz paired with 940-950MHz (blocks D to E)	895-905MHz paired with 940-950MHz (blocks D to E)
	900-910MHz paired with 945-955MHz (blocks E to F)	900-910MHz paired with 945-955MHz (blocks E to F)
	905-915MHz paired with 950-960MHz (blocks F to G)	905-915MHz paired with 950-960MHz (blocks F to G)

Export options: [CSV](#) | [Excel](#) | [XML](#)

Please note that it is also necessary to assign frequencies to any unliberalised spectrum holdings that existing licence-holders may retain under their current licence conditions. Where applicable, any such licence-holders will also be able to bid for their preferred frequency assignment in the Assignment Round.

B. 1.4.2 During the Assignment Round

When the Assignment Round begins, the main frame will update automatically, displaying a message above the Round Schedule indicating that the Assignment Round is in progress.

You may only submit Assignment Bids if there are multiple assignment options that apply to you that may conflict with the preferences of other Bidders. If you do not have any assignment options that may potentially conflict with any other Bidders, you will be asked to wait until the round has ended, and will not have any assignment options to bid on.

a) Entering a Bid

When the Assignment Round is in progress, your main frame presents you with a Bid decision table listing all the assignment options available to you in all relevant bands. The Bid decision table will have a field for entering a discretionary Bid Amount corresponding to that option.

Below the Bid decision table you will find a "Reset" button and a "Check" button. Clicking on the Reset button will reset all your bid amounts to €0. Clicking on the Check button will check your Bids for validation by the EAS. Note that any non-numeric characters will be ignored by the EAS and acknowledged with an error message.

You must submit all your Bids simultaneously. Therefore, you should enter your Bids for all options you may wish to Bid for before checking and submitting your Bid decision.

Figure 29: Bid form for the Assignment Round

Irish Multi-Band Spectrum Award 2012

Powered by **dot.econ WebBidder**

User: Entrant2

The Assignment Round is in progress

Timer: Thu 30 Aug 2012 15:46:50

Assignment Round
In round
No decision checked
Time left: 43m: 13s
No unread messages
Connected to server

You are logged in as: Entrant2

Summary of Round Schedule
Start time: 30 August 2012 15:46 BST
Duration: 44 minutes
End time: 30 August 2012 16:30 BST

Band	Time slice 1 frequency assignment	Time slice 2 frequency assignment	Amount of your Bid
800MHz	N/A	791-801MHz paired with 832-842MHz (blocks A to B)	€0
		801-811MHz paired with 842-852MHz (blocks C to D)	€0
		811-821MHz paired with 852-862MHz (blocks E to F)	€0
900MHz	880-890MHz paired with 925-935MHz (blocks A to B)	880-890MHz paired with 925-935MHz (blocks A to B)	€0
	885-895MHz paired with 930-940MHz (blocks B to C)	885-895MHz paired with 930-940MHz (blocks B to C)	€0
	890-900MHz paired with 935-945MHz (blocks C to D)	890-900MHz paired with 935-945MHz (blocks C to D)	€0
	895-905MHz paired with 940-950MHz (blocks D to E)	895-905MHz paired with 940-950MHz (blocks D to E)	€0
	900-910MHz paired with 945-955MHz (blocks E to F)	900-910MHz paired with 945-955MHz (blocks E to F)	€0
	905-915MHz paired with 950-960MHz (blocks F to G)	905-915MHz paired with 950-960MHz (blocks F to G)	€0

Please note that it is also necessary to assign frequencies to any unlicensed spectrum holdings that existing licence-holders may retain under their current licence conditions. Where applicable, any such licence-holders will also be able to bid for their preferred frequency assignment in the Assignment Round.

b) Bid Submission

When you have entered your Bid Amounts for the assignment options you wish to bid for, click on the "Check" button to check them with the EAS. The main frame will update and display a message indicating that you have checked a valid decision in the Assignment Round, along with a summary of the Bids checked. If there are any invalid Bids, the EAS will provide error messages to Bidders explaining why the Bid(s) are invalid.

Figure 30: Summary of Assignment Bids checked

Irish Multi-Band Spectrum Award 2012

Powered by **dot.econ WebBidder**

User: Entrant2

The Assignment Round is in progress

Timer: Thu 30 Aug 2012 15:49:29

Assignment Round
In round
Valid decision checked
Time left: 40m: 21s
No unread messages
Connected to server

You are logged in as: Entrant2

• You have checked a valid decision for the Assignment Round

Summary of Round Schedule
Start time: 30 August 2012 15:46 BST
Duration: 44 minutes
End time: 30 August 2012 16:30 BST

Band	Time slice 1 frequency assignment	Time slice 2 frequency assignment	Amount of your Bid
800MHz	N/A	791-801MHz paired with 832-842MHz (blocks A to B)	€10,000
		801-811MHz paired with 842-852MHz (blocks C to D)	€5,000
		811-821MHz paired with 852-862MHz (blocks E to F)	€0
900MHz	880-890MHz paired with 925-935MHz (blocks A to B)	880-890MHz paired with 925-935MHz (blocks A to B)	€0
	885-895MHz paired with 930-940MHz (blocks B to C)	885-895MHz paired with 930-940MHz (blocks B to C)	€0
	890-900MHz paired with 935-945MHz (blocks C to D)	890-900MHz paired with 935-945MHz (blocks C to D)	€0
	895-905MHz paired with 940-950MHz (blocks D to E)	895-905MHz paired with 940-950MHz (blocks D to E)	€10,000
	900-910MHz paired with 945-955MHz (blocks E to F)	900-910MHz paired with 945-955MHz (blocks E to F)	€7,000
	905-915MHz paired with 950-960MHz (blocks F to G)	905-915MHz paired with 950-960MHz (blocks F to G)	€0

Please note that it is also necessary to assign frequencies to any unlicensed spectrum holdings that existing licence-holders may retain under their current licence conditions. Where applicable, any such licence-holders will also be able to bid for their preferred frequency assignment in the Assignment Round.

Submit

Return to Bid form

Please check all the Bid Amounts carefully and ensure that they have the exact number of digits you expect and that you have not made any typing errors. Also check that you have included all (and only) the Bids you wish to submit. You may only submit one list of Bids (which may contain a Bid for each option presented) and, once submitted, you will not be able to modify, withdraw or add any Bids. In order to assist

you in checking your Bid, the options for which you have specified a positive Bid Amount will be highlighted with a yellow shaded background, and the Bid Amount will be displayed in large bold font.

If you wish to confirm your decision, click on the “Submit” button. Otherwise click on the “Return to Bid form” button to return to the Bid form to modify your Bids.

c) After submitting your Bids

When you have submitted your Bids, your main frame will refresh to display a message indicating that you have submitted your Bids, along with a table detailing the Bids you have submitted. The options for which you have specified a positive Bid Amount will be highlighted with a yellow shaded background, and the Bid Amount will be displayed in large bold font.

Figure 31: Summary of Assignment Bids submitted

The screenshot shows the 'Irish Multi-Band Spectrum Award 2012' web interface. The main heading is 'The Assignment Round is in progress'. A message states: 'You have submitted your decision for the Assignment Round'. Below this is a 'Summary of Round Schedule' with the following details:

- Start time: 30 August 2012 15:46 BST
- Duration: 44 minutes
- End time: 30 August 2012 16:30 BST

A table displays the submitted bids. The table has four columns: Band, Time slice 1 frequency assignment, Time slice 2 frequency assignment, and Amount of your Bid. The bids are as follows:

Band	Time slice 1 frequency assignment	Time slice 2 frequency assignment	Amount of your Bid
800MHz	N/A : 791-801MHz paired with 832-842MHz (blocks A to B)		€10,000
	N/A : 801-811MHz paired with 842-852MHz (blocks C to D)		€5,000
	N/A : 811-821MHz paired with 852-862MHz (blocks E to F)		€0
900MHz	880-890MHz paired with 925-935MHz (blocks A to B)	880-890MHz paired with 925-935MHz (blocks A to B)	€0
	885-895MHz paired with 930-940MHz (blocks B to C)	885-895MHz paired with 930-940MHz (blocks B to C)	€0
	890-900MHz paired with 935-945MHz (blocks C to D)	890-900MHz paired with 935-945MHz (blocks C to D)	€0
	895-905MHz paired with 940-950MHz (blocks D to E)	895-905MHz paired with 940-950MHz (blocks D to E)	€10,000
	900-910MHz paired with 945-955MHz (blocks E to F)	900-910MHz paired with 945-955MHz (blocks E to F)	€7,000
	905-915MHz paired with 950-960MHz (blocks F to G)	905-915MHz paired with 950-960MHz (blocks F to G)	€0

Please note that it is also necessary to assign frequencies to any unlicensed spectrum holdings that existing licence-holders may retain under their current licence conditions. Where applicable, any such licence-holders will also be able to bid for their preferred frequency assignment in the Assignment Round.

B. 1.4.3 End of the Assignment Round

Once the results for the Assignment Round are approved by the Auctioneer, the Auction ends. When the Assignment Round ends, your main frame will update with a message indicating that the round has ended and asking you to wait for the Auctioneer to approve results.

If you have failed to submit your Assignment Bids within the round (including during any potential extension, described in Section B. 1.6), you will not be able to submit any Assignment Bids (even if you have checked a valid list of Bids but have failed to submit it).

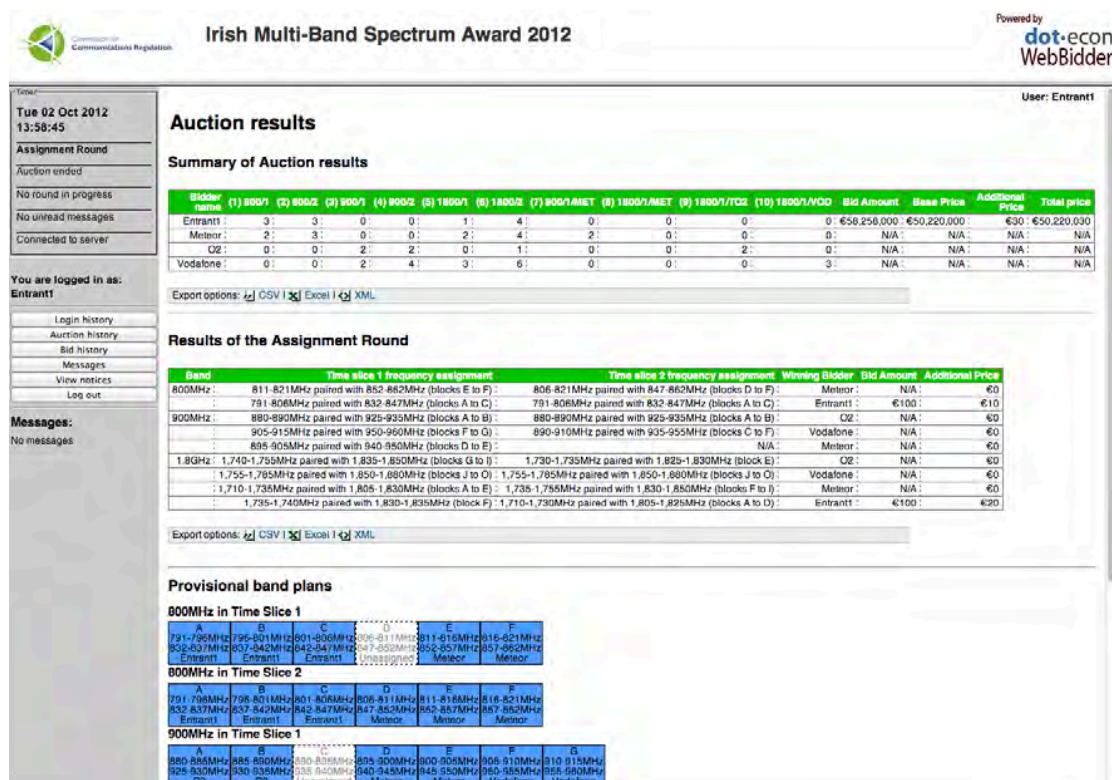
When the Auctioneer announces the results of the Assignment Round, your main frame will display the Auction Results.

B. 1.5 Auction results

When the Auctioneer approves the Auction Results, your main frame will update to show the message “Auction results” and provide the following information:

- the specific frequencies assigned to you at the end of the Assignment Round for those categories where you were able to bid;
- your winning Bid Amounts in the Main and Assignment Stages, the Total Price you have to pay for your licence broken down into your Base Price and Additional Price;¹²
- the Additional Price applicable to other Bidders; and
- the lots assigned to other Winners in the auction.

Figure 32: Auction results



B.1.6 Extensions

Extension rights are defined independently for the Primary Bid Rounds, the Supplementary Bids Round and the Assignment Round of the Auction. According to the Auction Rules:

- Bidders will start the Primary Bid Rounds with two extension rights;¹³

¹² Note that in the case where you did not submit any Assignment Bids whether during the round or during any extension, your Additional Price will be zero.

- Bidders will have a single extension right for the Assignment Bids Round; and
- Bidders will also have a single extension right for the Supplementary Bids Round.

If a Bidder fails to submit its Bid(s) before the end of a round (and, in the case of a Primary Bid Round, provided that the Bidder has at least one extension remaining) the round will automatically enter into an extension period of at most 30 minutes, during which the Bidder may still submit its Bid(s) for the round. The auction status in the control panel will read "In extension" for all Bidders.

The round will be closed for any Bidders who are not using an extension, regardless of whether such a Bidder was eligible to bid and had not been able to submit its Bid(s) within the Round Schedule for the round (in the event that the Bidder had no extensions left).

Figure 33: Round extended, for Bidder who is not in extension

The screenshot shows the WebBidder interface for the Irish Multi-Band Spectrum Award 2012. The page header includes the Commission for Communications Regulation logo, the title "Irish Multi-Band Spectrum Award 2012", and the "dot-econ WebBidder" logo. A central notification reads "Round ended, please wait for ComReg to notify results". On the left, a control panel displays the following information:

Timer
Thu 30 Aug 2012 15:52:53
Assignment Round
in extension
Decision submitted
No round in progress
No unread messages
Connected to server
You are logged in as: Entrant2

On the right side of the control panel, it says "User: Entrant2".

Note that while this illustration is for an extension of the Assignment Round, the notification that the round has been extended would display similarly in a Primary Bid Round or the Supplementary Bids Round.

The Bidder(s) who are using an extension will see their auction status and timer backgrounds in the control panel shaded blue. Submitting a decision during extension follows the same procedure as during a round. Bidders who are using an extension will be presented with an extension schedule displayed above the round schedule on the next occasion in which they refresh their main interface – however, the interface will not be refreshed automatically to prevent data loss in the event that the Bidder was in the process of entering a Bid.

¹³ ComReg has reserved the right to issue further extension rights for use during the Primary Bid Rounds in exceptional circumstances

Figure 34: Round extended, for Bidder who is in extension, before refreshing main frame

The screenshot displays the WebBidder interface for the Irish Multi-Band Spectrum Award 2012. The main heading is "Round 2 in progress". The timer shows "Thu 30 Aug 2012 16:46:11". The interface is powered by dot.econ WebBidder. The user is identified as "Entrant1".

Primary Bid Rounds

- in extension
- No decision checked
- Time left: 26m: 49s
- No unread messages
- Connected to server

You are logged in as: Entrant1

- Supplementary Bids editor
- Login history
- Auction history
- Bid history
- Messages
- View notices
- Log out

Messages:
No messages

Summary of Round Schedule

Round: 2
Start time: 30 August 2012 16:42 BST
Duration: 1 minute
End time: 30 August 2012 16:43 BST

Eligibility

Relevant Lot Categories	Eligibility to bid in round 2	Eligibility associated with Bid
Time Slice 1 Lots	8	8
Time Slice 2 Lots	11	11

Spectrum Caps

Relevant Lot Categories	Cap on spectrum additional to existing holdings	Spectrum (additional to existing holdings) in selected package
Time Slice 1 Lots	2x50MHz	2x30MHz
Time Slice 2 Lots	2x50MHz	2x35MHz
Sub-1GHz Lots in Time Slice 1	2x20MHz	2x10MHz
Sub-1GHz lots in Time Slice 2	2x20MHz	2x20MHz
900MHz Lots in Time Slice 1	2x10MHz	2x0MHz

Note that while this illustration is for an extension of a Primary Bid Round, the notification that the round has been extended would display similarly in the Supplementary Bids Round or the Assignment Round.

Figure 35: Round extended, for Bidder who is in extension, after refreshing main frame

The screenshot displays the WebBidder interface for the Irish Multi-Band Spectrum Award 2012. The main content area shows a notification for 'Round 2 in progress' which is 'In extension'. The notification includes the following details:

- Round ended at: 30 August 2012 16:43 BST
- Maximum extension duration: 30 minutes
- Extension due to end no later than: 30 August 2012 17:13 BST

Below the notification, there is a 'Summary of Round Schedule' section with the following information:

- Round: 2
- Start time: 30 August 2012 16:42 BST
- Duration: 1 minute
- End time: 30 August 2012 16:43 BST

The 'Eligibility' section contains a table with the following data:

Relevant Lot Categories	Eligibility to bid in round 2	Eligibility associated with Bid
Time Slice 1 Lots :	6	6
Time Slice 2 Lots :	8	8

The 'Spectrum Caps' section contains a table with the following data:

Relevant Lot Categories	Cap on spectrum additional to existing holdings	Spectrum (additional to existing holdings) in selected package
Time Slice 1 Lots :	2x50MHz :	2x15MHz
Time Slice 2 Lots :	2x50MHz :	2x25MHz
Sub-1GHz Lots in Time Slice 1 :	2x20MHz :	2x15MHz
Sub-1GHz lots in Time Slice 2 :	2x20MHz :	2x15MHz
900MHz Lots in Time Slice 1 :	2x10MHz :	2x5MHz

The interface also shows a sidebar with navigation options like 'Supplementary Bids editor', 'Login history', 'Auction history', 'Bid history', 'Messages', 'View notices', and 'Log out'. The user is logged in as 'Entrant2' and the timer shows 'Thu 30 Aug 2012 16:58:28'.

Note that while this illustration is for an extension of a Primary Bid Round, the notification that the round has been extended would display similarly in the Supplementary Bids Round or the Assignment Round.

When all Bidders who are using an extension have confirmed their Bid decision, the extension will close automatically. Alternatively, the extension will end after 30 minutes.

B. 2 The Bidder interface: Auxiliary functions

Auxiliary functions in the Auction system are:

- Supplementary Bids editor;
- Login history;
- Auction history;
- Bid history;
- Messages; and
- View notices

These functions are found in your control panel and will launch in a new browser window when the appropriate button is clicked. To allow for the new browser windows to open you should ensure that they will not be blocked by a pop-up blocking tool in your browser. Updates of these pages are not automatic and need to be triggered manually. This section describes these auxiliary functions in turn.

B. 2.1 Supplementary Bids editor

Your Supplementary Bids editor may be used prior to the scheduling of the Supplementary Bids Rounds to prepare a list of provisional Supplementary Bids. However, Supplementary Bids can only be submitted during the Supplementary Bids Round. Using the Supplementary Bids editor during the Primary Bid Rounds is optional. Once the Supplementary Bids Round has been scheduled, you will only be able to prepare your Supplementary Bids using the editor that will be provided in your main frame when the Supplementary Bids Round starts.

Packages you have bid for as part of your Application or during the Primary Bid Rounds will be added to your list automatically following the release of results for the round in which you submitted the Bid. These will include all the packages of Lots for which you have submitted an Initial Bid or a Primary Bid.¹⁴ In addition, you can add provisional Bids for packages of Lots you have not yet bid for, provisionally set higher Bids for those packages you have bid for via the interface directly or by uploading a Bid file, and download your list of provisional Supplementary Bids, as described in Section B. 1.3.2.

The Supplementary Bids editor provides functionality to assist you in managing the caps that result from the activity rules, which uses all the information available from the Bids you have submitted in rounds already completed and approved by the Auctioneer, and about the Round Prices prevailing in the Primary Bid Rounds:

- the Bids editor will identify the Constraining Package for packages of Lots subject to a cap, so that you can easily identify which Bids you would need to increase in order to raise the cap for a given package (note that packages of

¹⁴ Chain Bids, where relevant, will only be required on packages of Lots for which a Bid has already been submitted.

Lots that constrain other provisional Supplementary Bids are highlighted with a blue shaded background);

- it will also provide a calculation of the applicable caps based on the Bid Amounts you enter in your list of provisional Supplementary Bids, so that you can effectively enter a set of Bids that is valid and consistent with the Auction Rules;
- next to the caps that apply, you can find an “Explain” button that will open a new window with an explanation on how the cap is calculated and the inputs used for the calculation; and
- during the Primary Bid Rounds, the Supplementary Bids editor provides additional information in relation to whether Relaxed Primary Bids for any of the packages of Lots in the list of provisional Supplementary Bids are possible given the Relative Caps applicable and the Round Prices set by the Auctioneer for the current round.

Figure 36: Supplementary Bids editor - indicator for whether a Relaxed Primary Bid is possible

Supplementary Bids editor User: Entrant1

• Package successfully added to your list of provisional Supplementary Bids.

You can use the Supplementary Bids editor to enter packages you may wish to bid for into a list of provisional Supplementary Bids. Packages for which you submit Primary Bids will be automatically entered in this list by the system.

The editor will assist you in assessing your bidding possibilities for each package included in your list of provisional Supplementary Bids by:

- informing you of whether a Relaxed Primary Bid for the package is possible at current Round Prices in accordance with the activity rules (you should ensure that you reload the contents of the Supplementary Bids editor when the auctioneer sets new Round Prices in order to have access to up-to-date information);
- providing details on the constraints that apply to Bids for the package, given the Bids you have already submitted in completed and approved rounds, and taking account of the provisional Bid Amounts you enter for the Constraining Packages in your list.

The list of provisional Supplementary Bids as it stands at the end of the Primary Bid Rounds will be provided as the starting point for your list of Supplementary Bids in the Supplementary Bids Round. You will then be able to amend and submit (provided that all the Bids in the list are valid) these Bids in the Supplementary Bids Round. However, provisional Supplementary Bids will not be taken into account when determining the results of the Auction unless you check and submit them in the Supplementary Bids Round.

All Bids in your list of provisional Supplementary Bids need to be validated before you can submit any Supplementary Bids. If any of the Bids in the list is invalid, you will not be allowed to submit your list until you amend the invalid Supplementary Bids so they are valid, or delete them from the list.

[More...](#)

[Click here for help on using the Supplementary Bids editor](#)

Package ID	(1) 800/1	(2) 800/2	(3) 900/1	(4) 900/2	(5) 1800/1	(6) 1800/2	Time Slice 1 Eligibility associated with Bid	Time Slice 2 Eligibility associated with Bid	Package Reserve Price	Highest Bid Amount	Provisional Cap	Constraining Package UID	Explain	Modify	Bid Amount	Delete	Relaxed Primary Bid allowed
11	2	2	0	2	4	2	8	10	€51,480,000	€55,802,000	Not capped	N/A	N/A	<input type="checkbox"/>	€55,802,000	<input type="checkbox"/>	N/A
12	2	2	1	2	6	6	12	14	€73,090,000	N/A	€73,090,000	10	explain	<input type="checkbox"/>	€73,090,000	<input type="checkbox"/>	No
13	2	1	2	2	6	6	14	12	€67,380,000	N/A	€67,380,000	10	explain	<input type="checkbox"/>	€67,380,000	<input type="checkbox"/>	Yes
0	2	2	2	2	6	6	14	14	€75,640,000	€75,640,000	€75,640,000	10	explain	<input type="checkbox"/>	€75,640,000	<input type="checkbox"/>	N/A
10	2	2	0	2	4	3	8	11	€55,610,000	€55,610,000	€59,932,000	11	explain	<input checked="" type="checkbox"/>	€55,610,000	<input type="checkbox"/>	Yes

Export options: [CSV](#) | [Excel](#) | [XML](#) | [Bids File](#)

Upload a Supplementary Bids file

Select the file you wish to upload, then upload the file by clicking "Upload Bids". The file can be either tab separated (tsv) or comma separated (csv), all other formats will be rejected by the system.

Bids file to upload:

Clear existing Bids in your list of provisional Supplementary Bids before uploading

The Final Primary Package is highlighted with a yellow shaded background, while the provisional Supplementary Bids for packages that constrain other Supplementary Bids are highlighted with a blue shaded background. Note that as the Final Primary Package is only known after the Primary Bid Rounds have ended, information about the Final Price Cap will not be available until the Primary Bid Rounds have ended.

Once the Supplementary Bids Round has been scheduled, the editor will be disabled and will not be accessible via the control panel.

B. 2.2 Log in history

All attempts to access the EAS are logged. This function presents a log of your logging in and logging out history from the start of the Auction:

- Each successful login will create two entries:
 - when first submitting your password, you will create a “Logging in” entry, with details on the browser used for accessing the EAS; and
 - when the login sequence is completed, with the timer applet having successfully established a connection, this will create a “Logged in” entry, with details of the Java version used to establish the connection.
- Each successful logout will also create two entries, both by the web browser:
 - a “Logging out” entry will be created when the logout process is started; and
 - a “Logged out” entry will be created on successful termination of the session.
- If you do not use the logout button when logging out and the auction system terminates your session automatically as a result, this is logged as an “Auto logged out”.
- If you lose connection and successfully load a connection lost page when notified by the applet, a “Connection lost” entry will be created.
- Invalid login attempts will be logged with the entry “Invalid login attempt”, with details of the IP address from which the login was attempted.
- Parallel login attempts will be logged with the entry “Parallel login attempt”, with details of the IP address from which the login was attempted.

All log entries will have a timestamp to indicate when the action took place.

Figure 37: Login history

u

Login history ([refresh](#))

17 items found, displaying all items.

Action	Time	IP	Browser
Logging in	24 Jul 11:33:27	80.169.239.180	Mozilla/5.0 (Macintosh; Intel Mac OS X 10_7_4) AppleWebKit/536.11 (KHTML, like Gecko) Chrome/20.0.1132.57 Safari/536.11
Parallel login attempt	24 Jul 11:33:27	80.169.239.180	Mozilla/5.0 (Macintosh; Intel Mac OS X 10_7_4) AppleWebKit/536.11 (KHTML, like Gecko) Chrome/20.0.1132.57 Safari/536.11
Logged in	24 Jul 11:33:20	80.169.239.180	Mozilla/4.0 (Windows 7 6.1) Java/1.6.0_31
Logging in	24 Jul 11:33:18	80.169.239.180	Mozilla/5.0 (compatible; MSIE 9.0; Windows NT 6.1; WOW64; Trident/5.0)
Logging in	24 Jul 11:33:13	80.169.239.180	Mozilla/5.0 (compatible; MSIE 9.0; Windows NT 6.1; WOW64; Trident/5.0)
Invalid login attempt	24 Jul 11:33:13	80.169.239.180	Mozilla/5.0 (compatible; MSIE 9.0; Windows NT 6.1; WOW64; Trident/5.0)
Auto logged out	24 Jul 11:32:29		
Logging in	24 Jul 11:30:52	80.169.239.180	Mozilla/5.0 (compatible; MSIE 9.0; Windows NT 6.1; WOW64; Trident/5.0)
Logged in	24 Jul 11:30:52	80.169.239.180	Mozilla/4.0 (Windows 7 6.1) Java/1.6.0_31
Logging out	24 Jul 11:30:41	80.169.239.180	Mozilla/5.0 (compatible; MSIE 9.0; Windows NT 6.1; WOW64; Trident/5.0)
Logged out	24 Jul 11:30:41	80.169.239.180	Mozilla/5.0 (compatible; MSIE 9.0; Windows NT 6.1; WOW64; Trident/5.0)
Logged in	24 Jul 11:23:27	80.169.239.180	Mozilla/4.0 (Windows 7 6.1) Java/1.6.0_31
Logging in	24 Jul 11:23:25	80.169.239.180	Mozilla/5.0 (compatible; MSIE 9.0; Windows NT 6.1; WOW64; Trident/5.0)
Logging out	24 Jul 11:22:44	80.169.239.180	Mozilla/5.0 (compatible; MSIE 9.0; Windows NT 6.1; WOW64; Trident/5.0)
Logged out	24 Jul 11:22:44	80.169.239.180	Mozilla/5.0 (compatible; MSIE 9.0; Windows NT 6.1; WOW64; Trident/5.0)
Logged in	24 Jul 11:22:38	80.169.239.180	Mozilla/4.0 (Windows 7 6.1) Java/1.6.0_31
Logging in	24 Jul 11:22:37	80.169.239.180	Mozilla/5.0 (compatible; MSIE 9.0; Windows NT 6.1; WOW64; Trident/5.0)

Export options: [CSV](#) | [Excel](#) | [XML](#)

B.2.3 Auction history

This presents a summary of the aggregate information provided with round results. This includes information about the Round Prices, demand, identification of Lot Categories that had excess demand and information about the Bids you submitted with your Application and in each completed Primary Bid Round. The Lots available in each Lot Category are also provided as a separate row for your convenience when checking excess demand.

At the end of the Primary Bid Rounds, the Auction history will also report the results of the final Primary Bid Round.

At the end of the Supplementary Bids Round, when the Main Stage results are released, this page will also display the Main Stage results.

Figure 38: Auction history at the end of the Primary Bid Rounds

User: Entrant1

Auction history

Primary Bid Rounds

Aggregate results by round

Auction history

Round (Lots available)	Round Price for (1) 800/1	Aggregate Demand for (1) 800/1	Round Price for (2) 800/2	Aggregate Demand for (2) 800/2	Round Price for (3) 900/1	Aggregate Demand for (3) 900/1	Round Price for (4) 900/2	Aggregate Demand for (4) 900/2	Round Price for (5) 1800/1	Aggregate Demand for (5) 1800/1	Round Price for (6) 1800/2	Aggregate Demand for (6) 1800/2
Application	€2,550,000	8	€8,260,000	8	€2,550,000	6	€8,260,000	8	€1,270,000	21	€4,130,000	32
1	€2,550,000	8	€8,260,000	10	€2,550,000	8	€8,260,000	10	€1,270,000	11	€4,130,000	13
2	€2,805,000	7	€9,086,000	10	€2,805,000	8	€9,086,000	10	€1,397,000	11	€4,130,000	14
3	€3,086,000	7	€9,995,000	10	€3,086,000	8	€9,995,000	10	€1,537,000	10	€4,130,000	12
4	€3,395,000	1	€10,995,000	3	€3,395,000	2	€10,995,000	2	€1,691,000	4	€4,130,000	2

Export options: [CSV](#) | [Excel](#) | [XML](#)

Results

Eligibility

Relevant Lot Categories	Eligibility to bid in round 4	Eligibility associated with Bid
Time Slice 1 Lots	7	5
Time Slice 2 Lots	8	4

Extensions

Extensions available for the Primary Bid Rounds	Extensions used in round 4
2 x 30 minutes	1 x 30 minutes

Lot Category	Eligibility Points per Lot	Lots available	Time Slice	Reserve Price	Round Price in round 4	Your demand in round 4	Eligibility by Lot Category	Expenditure by Lot Category	Aggregate Demand in round 4	Excess Demand in round 4
(1) 800/1	2	6	1	€2,550,000	€3,395,000	1	2	€3,395,000	1	No
(2) 800/2	2	6	2	€8,260,000	€10,995,000	1	2	€10,995,000	3	No
(3) 900/1	2	5	1	€2,550,000	€3,395,000	1	2	€3,395,000	2	No
(4) 900/2	2	7	2	€8,260,000	€10,995,000	1	2	€10,995,000	2	No
(5) 1800/1	1	6	1	€1,270,000	€1,691,000	1	1	€1,691,000	4	No
(6) 1800/2	1	15	2	€4,130,000	€4,130,000	0	0	€0	2	No
(7) 900/1/MET	2	2	1	€2,550,000	€3,395,000	0	0	€0	0	No
(8) 1800/1/MET	1	3	1	€1,270,000	€1,691,000	0	0	€0	1	No
(9) 1800/1/TO2	1	3	1	€1,270,000	€1,691,000	0	0	€0	1	No
(10) 1800/1/VOD	1	3	1	€1,270,000	€1,691,000	0	0	€0	1	No

Export options: [CSV](#) | [Excel](#) | [XML](#)

B.2.4 Bid history

This tabulates the Bids you submitted during the course of the Auction:

- Bid submitted as part of your Application;
- After each Primary Bid Round, the Bids you have submitted in the most recently completed round will be added to your Bid history – this includes the Round Price for each Lot Category, the package of Lots you bid for, the Eligibility associated with the package and the total price for the package you bid for;
- Primary Bids are shown on a white background, while Chain Bids you have submitted (if any) are shown on a shaded (grey) background against the relevant round. In order to identify the order in which Chain Bids have been required, the Bidder should refer to the information about the Relative Caps and Constraining Packages available from the Supplementary Bids editor.
- After the Supplementary Bids Round, the full list of all the Supplementary Bids you submitted will also be added to the Bid history.

Figure 39: Bid history for the Primary Bid Rounds

User: Entrant1

Bid history

Your Bid history

[Toggle legend](#)

Legend	
E1	Eligibility in Time Slice 1
E2	Eligibility in Time Slice 2
EB1	Time Slice 1 Eligibility associated with Bid
EB2	Time Slice 2 Eligibility associated with Bid
Amount	Bid Amount

Primary Bid Rounds

Round	Round Price for (1) 800/1	Round Price for (2) 800/2	Round Price for (3) 900/1	Round Price for (4) 900/2	Round Price for (5) 1800/1	Round Price for (6) 1800/2	Demand for (1) 800/1	Demand for (2) 800/2	Demand for (3) 900/1	Demand for (4) 900/2	Demand for (5) 1800/1	Demand for (6) 1800/2	E1	E2	EB1	EB2	Amount	
Application	€2,550,000	€8,260,000	€2,550,000	€8,260,000	€1,270,000	€4,130,000	2	2	2	2	6	6	14	14	14	14	€75,640,000	
1	€2,550,000	€8,260,000	€2,550,000	€8,260,000	€1,270,000	€4,130,000	1	2	2	2	2	2	1	14	14	8	9	€47,360,000
2	€2,805,000	€9,086,000	€2,805,000	€9,086,000	€1,397,000	€4,130,000	1	2	2	2	2	2	2	8	9	8	10	€55,813,000
	€2,805,000	€9,086,000	€2,805,000	€9,086,000	€1,397,000	€4,130,000	1	2	2	2	2	2	1	8	9	8	9	€51,683,000
3	€3,086,000	€9,995,000	€3,086,000	€9,995,000	€1,537,000	€4,130,000	1	2	2	2	1	1	0	8	9	7	8	€50,775,000
4	€3,395,000	€10,995,000	€3,395,000	€10,995,000	€1,691,000	€4,130,000	1	1	1	1	1	1	0	7	8	5	4	€30,471,000

Export options: [CSV](#) | [Excel](#) | [XML](#)

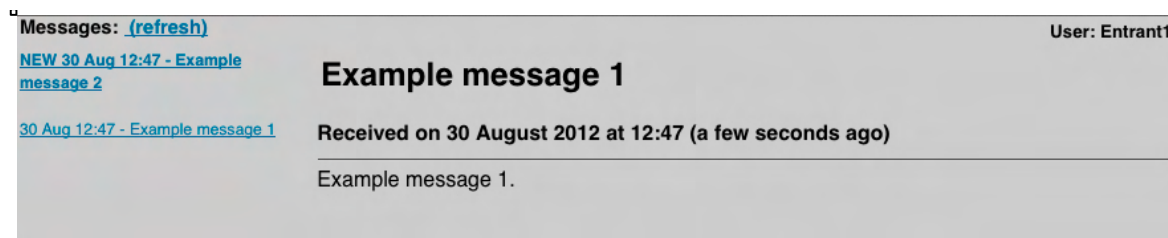
B.2.5 Messages

The left hand panel contains a list of messages sent to you by the Auctioneer, listed from top to bottom in chronological order. To read the contents of a particular message, click on the message title and the message will load on a separate browser window.

Alternatively, you can open a message centre in a separate browser window by clicking on the “Messages” button in the control panel. The window will contain a list of all messages received from the Auctioneer (which is also shown in the message list at the bottom of the control panel) and a message reading pane at the right hand side, where you can view the message you select from the list.

The messages window needs to be refreshed manually to check for new messages (note that you will be alerted about new messages on the timer applet). The communication functionality in the WebBidder system is one-way: Bidders cannot send messages to the Auctioneer through the EAS.

Figure 40: Message centre



B. 2.6 View notices

This function contains a list of notices issued by the Auctioneer, displayed from top to bottom in chronological order. This includes automated notices, such as notifications of Round Prices and Round Schedules or Round Results, and notices manually sent by the Auctioneer, which will appear at the top of your main frame until you acknowledge them.

To view a particular notice, click on the notice title. The notice will be displayed directly below the notice title.

Figure 41: View notices

User: Entrant2

Notices

[Extension closed notice sent by ComReg on 30 August 2012 at 15:57](#)

[Stage ended notice sent by ComReg on 30 August 2012 at 15:52](#)

[Rescheduled notice for the Assignment Round sent by ComReg on 30 August 2012 at 15:45](#)

[Schedule notice for the Assignment Round sent by ComReg on 30 August 2012 at 15:43](#)

[Stage ended notice sent by ComReg on 30 August 2012 at 15:33](#)

[Rescheduled notice for the Supplementary Bids Round sent by ComReg on 30 August 2012 at 15:06](#)

[Schedule notice for the Supplementary Bids Round sent by ComReg on 30 August 2012 at 15:02](#)

[Extension closed notice sent by ComReg on 30 August 2012 at 14:57](#)

[Round schedule notice for round 4 sent by ComReg on 30 August 2012 at 14:50](#)

Summary of Round Schedule

Round: 4
 Start time: 30 August 2012 14:51 BST
 Duration: 1 minute
 End time: 30 August 2012 14:52 BST

Notified Round Prices for round 4

Lot Category	Round Price in round 4
(1) 800/1	€3,395,000
(2) 800/2	€10,995,000
(3) 900/1	€3,395,000
(4) 900/2	€10,995,000
(5) 1800/1	€1,691,000
(6) 1800/2	€4,130,000

Notified Eligibility for round 4

Relevant Lot Categories	Eligibility to bid in round 4
Time Slice 1 Lots	4
Time Slice 2 Lots	8

Automated notice

[Round results notice for round 3 sent by ComReg on 30 August 2012 at 14:49](#)

[Round ended notice sent by ComReg on 30 August 2012 at 14:48](#)

B.3 Format of downloadable files

A number of tables provided on screen by the EAS are also available for download.

Download tables are available in three alternative formats:

- Excel (Microsoft Excel format, with extension “.xls”), which can directly be opened in Excel;
- CSV (Coma Separated Values, UTF-8 encoding and CRLF linebreaks, with extension “.csv”), which can be used for importing into other software tools, or opened in a text editor;
- XML (UTF-8 encoding, with extension “.xml”), which can be used for importing into other software tools, or opened in a text editor.

In addition, you can also download your list of (provisional) Supplementary Bids in “Bids File” format, which is the format used for uploading bids files (see Section B. 1.3.2 for details).

Please note that Excel does not use UTF-8 encoding as default, and therefore some symbols might not be displayed correctly when opening CSV files in Excel unless the user manually specifies that the file is UTF-8 encoded.

Please refer to the “Downloadable files” document for more information on the content and format of the downloadable files at each stage of the Auction.

Section C Required system configurations

C. 1 System requirements and recommendations

The EAS runs as a Java application in a standard web browser, and connects to the Auction server over the public Internet. The connection between your browser and the Auction server is encrypted. To participate in the Auction you therefore need:

- a computer with:
 - a recent version of Java 6; and
 - a web browser that supports Java, JavaScript and cookies; and
- a reliable Internet connection.

Bidders are advised to have one or more backup computers, at least one backup Internet connection and potentially one backup location to be able to switch to these in the event that they experience problems with their primary location/equipment.

For encryption and authentication, the Auction-specific digital certificates (provided to you by ComReg) need to be installed on the computer(s) you will use to access the EAS.

C. 1.1 Operating system and web browser

As a Java application, the EAS should work on most operating systems and web browsers. However, the process and required settings for installing and enabling the use of the digital certificates may differ depending on the combination of operating system and web browser you are using.

Not all possible configurations have been tested, but it has been checked that the EAS can be accessed both from Windows XP, Vista or 7; and from Mac OSX.

This manual provides instructions only for the following combinations:

- Windows 7 and Internet Explorer 7+
- Windows 7 and Mozilla Firefox 4+

The installation process and settings for other browsers and operating systems should be similar, but you may need to consult your system administrator or another technical expert in case of difficulties. If you are using a combination of operating system or browser which is different to the ones listed above, you should ensure that successful access to the EAS is tested prior to the Auction. If you require further assistance on installing and enabling the use of the digital certificates on other combinations of operating systems and web browser, please contact ComReg.

You are advised to ensure you have a secure computer, and that you use any anti-virus and anti-malware software you deem necessary. The system resources used to access the EAS are not onerous. However, due to the importance of the transactions carried out through the EAS, Bidders are advised to not run any other applications while connected to the EAS, in order to not compromise the security and reliability of the communication between your Bidder's computers and the EAS.

C. 1.2 Power management settings

If your computer hibernates or suspends automatically, you will be automatically logged out and you will need to go through the login procedures again when the computer is awakened.

To ensure that you can view progress in the Auction as and when required, we recommend that you:

- turn off any power management features on the computer you are using to connect to the EAS, such as automatic hibernation or suspension; and
- disable any screensavers.

C. 1.3 Display

We recommend that you use a display with a screen resolution of 1280x800 (or higher). Lower screen resolutions may require additional scrolling and thus lead to pages being more difficult to view.

C. 1.4 Java

To use the EAS you will need to have Java (version 6.22 or newer) installed on your computer(s) and enabled for your web browser.

Java is available for download at:

<http://www.java.com/>.

If you are using Windows, you can check whether Java is installed and what version you are using at:

<http://www.java.com/en/download/installed.jsp>.

C. 2 Web browser settings and plugins

C. 2.1 Accepting cookies and enabling JavaScript

To use all of the functionality provided by the EAS, you will need to have the following enabled for your web browser:

- Java
- JavaScript
- Cookies

If your web browser does not accept cookies or has JavaScript disabled you will receive an error message on the EAS login page. If Java is not installed on your computer(s) or is disabled for your web browser, you may be able to log into the EAS but the user interface will fail to load. Instructions on enabling JavaScript and accepting cookies are presented below.

a) Internet Explorer

To enable Internet Explorer to accept cookies:

- Open Internet Explorer.
- Click on **Tools** and select **Internet Options**.
- Open the **Privacy tab** and then click on the **Advanced** button to open the **Advanced Privacy Settings** window.
- Either:
 - Ensure that the **Override automatic cookie handling** option is not selected (recommended); or
 - If you wish to exert more customised control over cookie handling and have the **Override automatic cookie handling** option selected, you must ensure that **Accept** is chosen under **First-party cookies**.
- Click on **OK** to process any changes you have made.

To enable JavaScript on Internet Explorer:

- Open Internet Explorer.
- Click on **Tools** and select **Internet Options**.
- Open the **Security** tab and then click on the **Custom level** button to open the **Security Settings – Internet Zone** window.
- Under **Scripting**, ensure that **Active scripting** is set to **Enable**.
- Click on **OK** to process any changes you have made.

b) Firefox

To enable Firefox to accept cookies:

- Open Firefox.
- Click on **Tools** and select **Options**.
- Open the Privacy tab
- In the drop-down menu next to Firefox, either select :
 - **Remember history**, which allows cookies by default; or
 - **Use custom settings** for history and ensure that both **Accept** cookies from sites and **Accept third-party cookies** are selected.

- Click on **OK** to process any changes you have made.

To enable JavaScript on Firefox:

- Open Firefox.
- Click on **Tools** and select **Options**.
- Open the Content tab.
- Ensure that **Enable JavaScript** is selected.
- Click on **OK** to process any changes you have made.

C. 2.2 Pop-up blockers and other web browser plugins or add-ons

The EAS displays certain information in new browser windows. You should ensure that your browser's pop-up blocker allows for this.

It is also recommended that you disable all other browser plugins and toolbars that may interfere with the display of web content.

C. 2.3 Opening other websites

You should not open any other website in your web browser while using the EAS. Depending on the web browser, third-party websites could present a potential security risk.

C. 3 Network connection

To use the EAS, your computer(s) needs to be connected to the Internet.

We recommend using a reliable broadband Internet connection with a transmission rate of 512 kbit/s or higher and with reasonably stable latency. Slower connections may work but may lead to delays when loading the pages.

Please note that data traffic between your computer(s) and the Auction system could be subject to congestion or service outages on the Internet. To avoid connectivity related problems, we recommend that you confirm all decisions well within the Round Schedule and have a back-up Internet connection available.

Proxy servers

The EAS client contains a Java applet that establishes and maintains a direct connection to the Auction server.

If you are accessing the Internet via a proxy server, please ensure that the proxy server does not interfere with the communication between the EAS's Java applet and the Auction server.

You may need to refer to your company's IT department for any queries related to your proxy server settings.

C. 4 Restricting SSL to protocol SSL v3

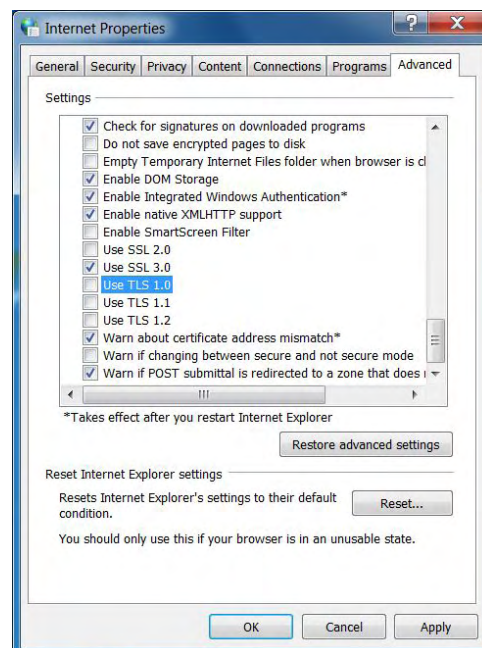
Communication between the client and the server is encrypted to protect the integrity of the data exchanged between Bidders and the Auctioneer. There are several standard protocols available for this encryption, with newer versions having been developed to address security breaches and exploits that have been found in older protocols.

In particular, the TLSv1.0 protocol that is used as the default secure protocol by many web browsers and operating systems is known to have several flaws and security issues (including being vulnerable to the so-called BEAST exploit) that mean that traffic between a computer and the server could be decrypted by a third-party who intercepts it. This vulnerability also affects the SSLv3 protocol; however, SSLv3 allows for a tighter control over the cipher suites used in order to contain this vulnerability. For this reason, communication with the EAS will require the use of SSLv3 by the browser. As many browsers will use TLSv1.0 as the default protocol, this protocol needs to be explicitly disabled on your computer(s).

C. 4.1 Restricting the SSL protocol for Internet Explorer on Windows 7

Go to the Windows Control Panel and open Internet Options. This opens the Internet Properties dialog.

Go to the tab Advanced and ensure that the options 'Use SSL 2.0', 'Use TLS 1.0' 'Use TLS 1.1' and 'Use TLS 1.2' are unchecked, and the option 'Use SSL 3.0' is checked.



C. 4.2 Restricting the SSL protocol in Java

Go to the Windows Control Panel and open Java. This opens the Java Control Panel.

Go to the tab Advanced and expand the node Security and its sub-node General. Ensure that the options 'Use SSL 2.0', 'Use TLS 1.0' 'Use TLS 1.1' and 'Use TLS 1.2' are unchecked, and the option 'Use SSL 3.0' is checked.



C.5 Installing the digital certificates

In order to securely establish an encrypted connection between your computer (the EAS client) and the Auction server, your computer needs to verify the server's identity, while the server needs to verify you as an authorised user of the system. This is done via digital certificates.

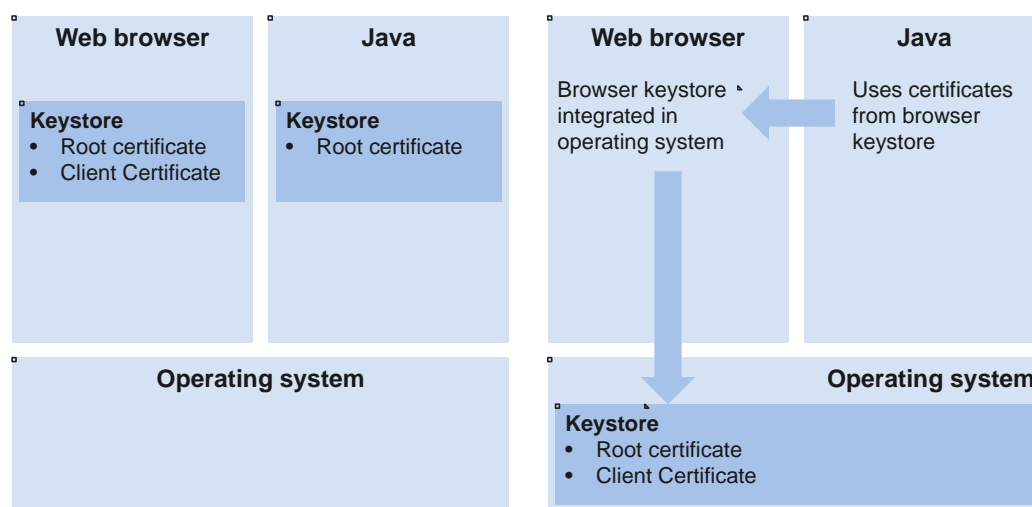
- The **root certificate** ('cacert') is used to identify the Auction server and to verify the integrity of the EAS application.
- The **client certificate** is used to identify you as an authorised EAS user.

The root certificate needs to be installed for your browser and for Java. The client certificate needs to be installed for your browser only.

The installation procedure differs slightly for different operating systems and browsers. Bidders should ensure that they have properly installed the certificates well ahead of the Auction.

Depending on the browser and operating system that you are using, Java may be able to use the root certificate installed for your browser, in which case you do not have to install the certificate separately for Java.

Figure 42: Access to digital certificates



The web browser and Java need access to the root certificate. The web browser also needs access to the client certificate. If the web browser is tightly integrated into the operating system the root certificate may not have to be installed separately for Java. This is the case for Internet Explorer on Microsoft Windows.

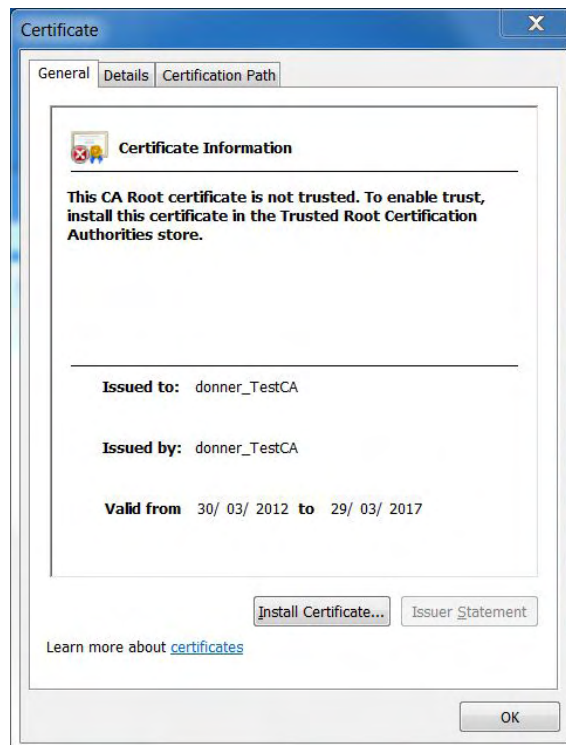
C.5.1 Installing digital certificates for Internet Explorer on Windows 7

The same installation process should work for all browsers that use Microsoft Windows' native keystore to manage digital certificates. For example, it works for Google Chrome.

You need to install the **root certificate** and your **client certificate**. Both certificate files are issued to you prior to the Auction.

a) Installing the root certificate

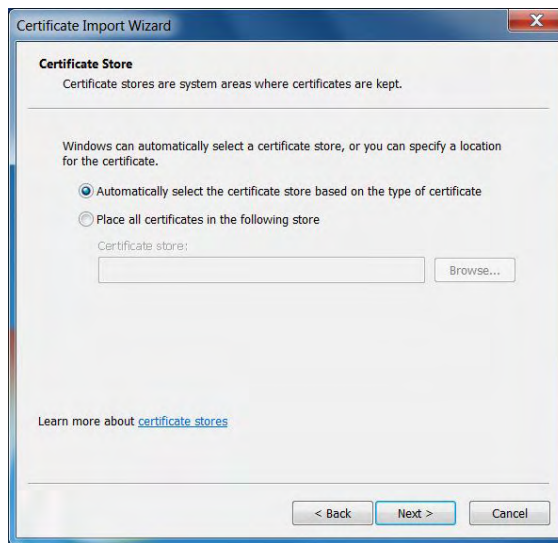
Go to the directory with your digital certificates. Double-click the root certificate ('cacert'). This opens the Certificate properties.



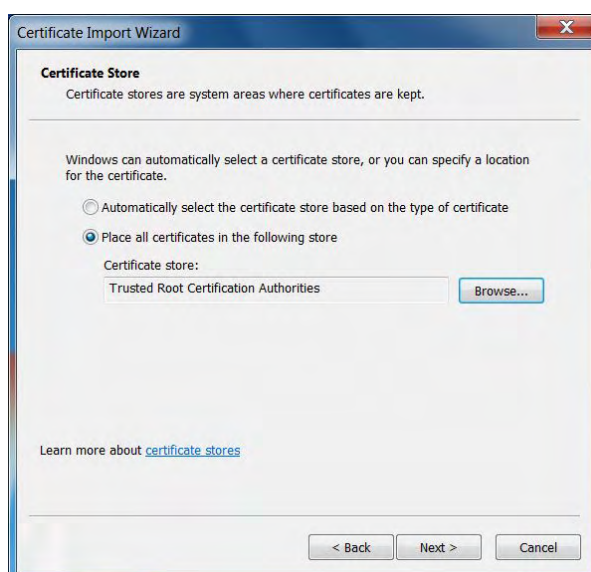
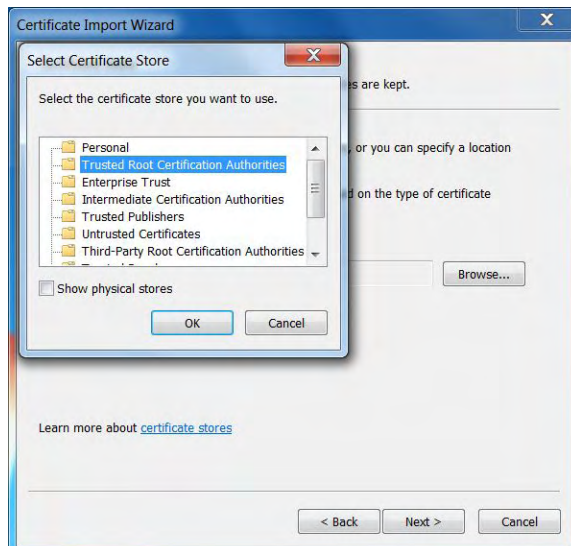
Click on Install Certificate ... to start the Certificate Import Wizard. Click Next to continue.



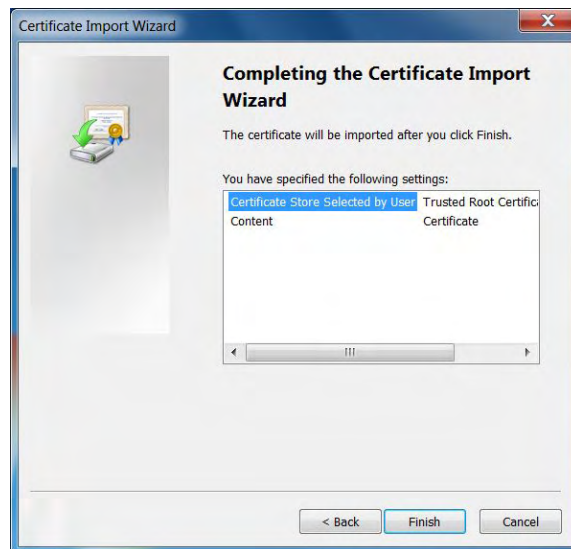
Select Place all certificates in the following store and click on Browse ... to open the keystore selection dialog.



Select the keystore Trusted Root Certification Authorities. Click OK to close the dialog and then Next to continue the installation.



On the installation summary page click Finish to install the certificate.



As this is an Auction-specific certificate you will receive a Security Warning. Click Yes to complete the installation.

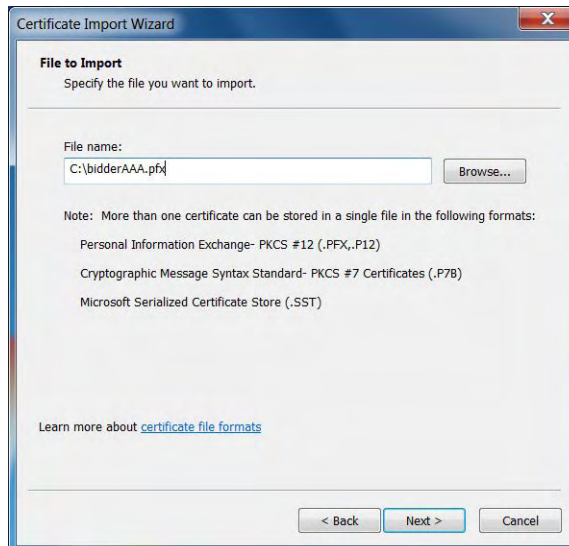


b) Installing the client certificate

Go to the directory with your digital certificates. Double-click the client certificate ('YourBidderName'). This starts the Certificate Import Wizard. Click Next to continue.



Your certificate file should already be selected. Click Next to continue.



Enter your Client Certificate Password and click Next.

The password for the certificate is different from your login password.

The password is case-sensitive.

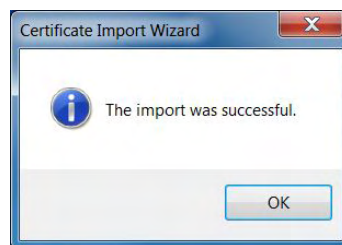
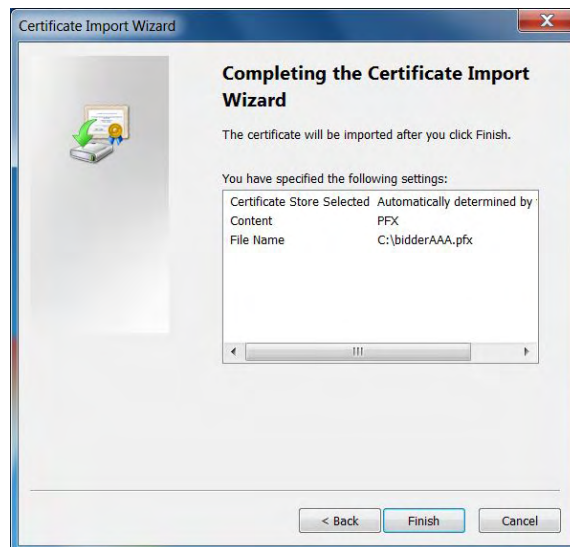
Do not tick 'Enable strong private key protection.'

If the 'Mark this key as exportable.' check-box is available do not tick this check-box.

Leave the 'Include all extended properties' check-box ticked.

Select Automatically select the certificate store based on the type of certificate and click Next to continue.

On the installation summary page click Finish to install the certificate.



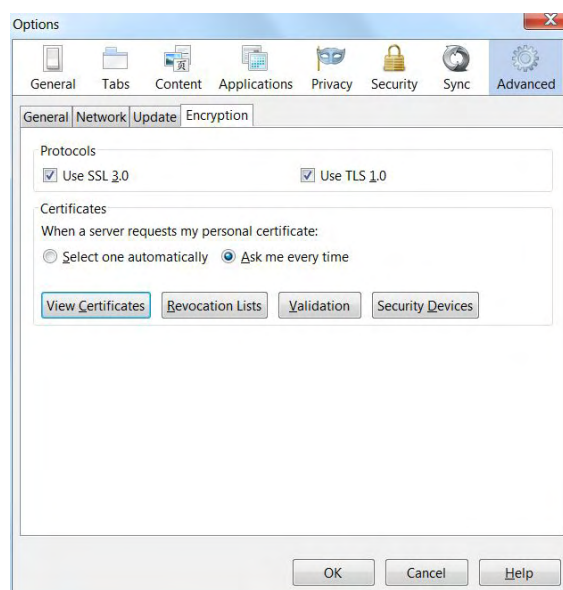
C. 5.2 Installing digital certificates for Firefox on Windows 7

A similar installation process should work for all browsers that use their own keystore to manage digital certificates.

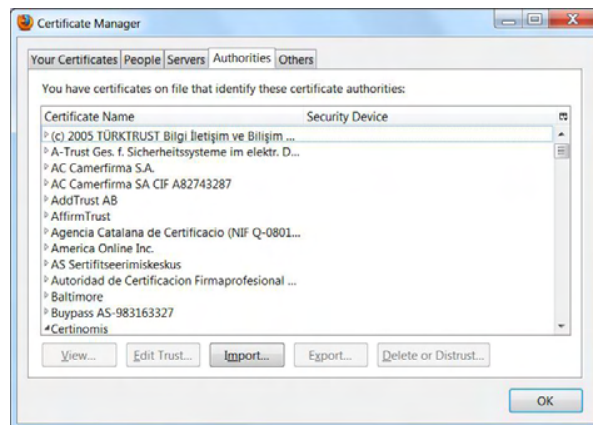
You need to install the **root certificate** and your **client certificate**. Both certificate files will be issued to you prior to the Auction.

a) Installing the root certificate

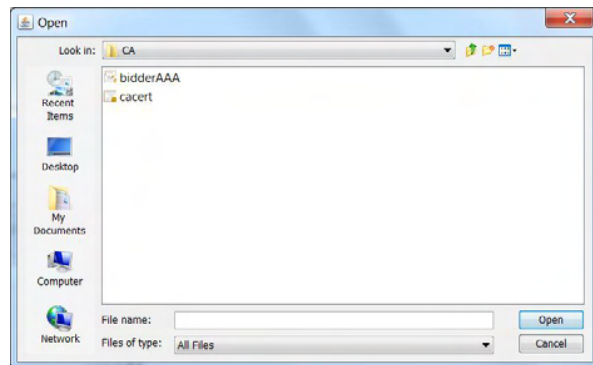
Open Options and go to the tab Advanced. Click on View Certificates to open the Firefox Certificate Manager.



Go to the tab Authorities and click on Import. This opens a file selection dialog.



Go to the directory with your digital certificates and select the root certificate ('cacert') that was provided to you. Click Open to continue.

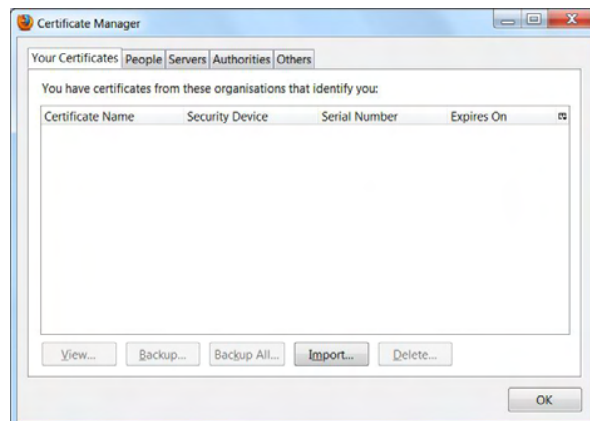


You will then be asked to select the certificate's purposes. Select Trust the CA to identify web sites and click Ok.

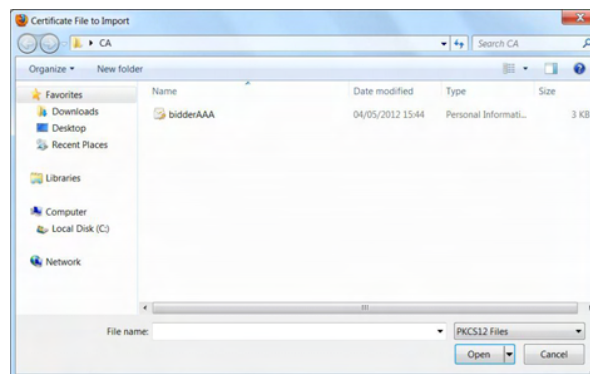


b) Installing the client certificate

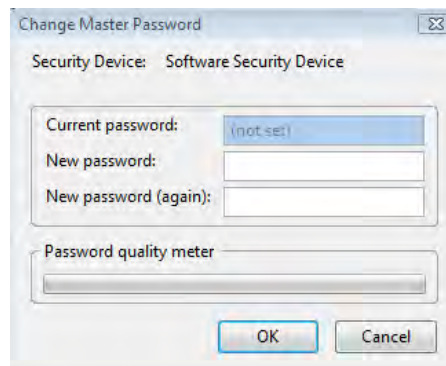
Still in the Firefox Certificate Manager go to the tab Your Certificates and click on Import. This opens a file selection dialog.



Go to the directory with your digital certificates and select the client certificate ('YourBidderName') that was provided to you. Click Open to continue.



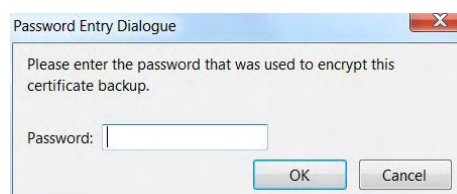
If you have not done so before, Firefox may ask you to set an optional master password. Leave the fields blank and click on Ok. You will see a warning message that you are not setting a master password. Click Ok to continue.

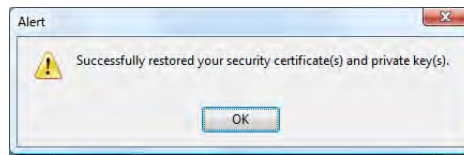


Enter your Client Certificate Password and click Ok to install the certificate.

The password for the certificate is different from your login password.

The password is case-sensitive.





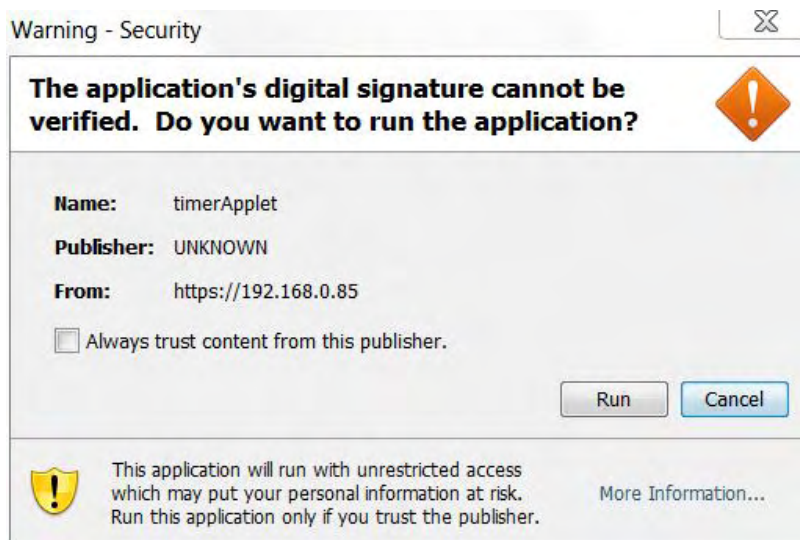
C. 5.3 Installing digital certificates for Java

a) If you are using a browser that allows Java to access the browser keystore

Some more recent versions of Internet Explorer and Firefox allow Java to access the browser keystore by default and use the certificates in the browser keystore. Therefore, it is not necessary to install the digital certificates for Java in these cases. Upon logging in, a pop up window will warn that the "web site's certificate can not be verified. Do you want to continue?" (see figure below). Click on **Yes**.



This may be followed by a second pop up window (see below) relating to the Auction system's timer applet warning that "The application's digital signature cannot be verified. Do you want to run the application?". Click on **Run**.



If you are using a browser that does not allow Java to use the certificates in the browser keystore by default, then you have to manually change your settings to either allow Java to use the certificates in the browser keystore (for browsers that uses the Windows keystore) or install the certificates on Java as described below.

b) If you are using a browser that uses the Windows keystore that Java can not access

For browsers that use the Window keystore such as older versions of Internet Explorer, it should be sufficient to activate 'Use certificates and keys in browser keystore' in the Java Control Panel to allow Java to access the Windows keystore.

Go to the Windows Control Panel and open Java. This opens the Java Control Panel.

Go to the tab Advanced and expand the node Security and its sub-node General. Ensure that the check-box 'Use certificates from browser keystore' is checked. Click on Apply to apply settings.



c) If you are using browsers with an inbuilt keystore that Java can not access

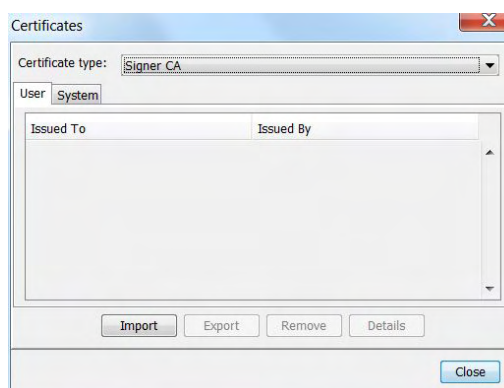
For browsers (such as older versions of Firefox) with an inbuilt keystore that Java cannot access, you need to install the root certificate for Java manually.

The root certificate needs to be installed as **Signer CA** and as **Trusted Certificate**.

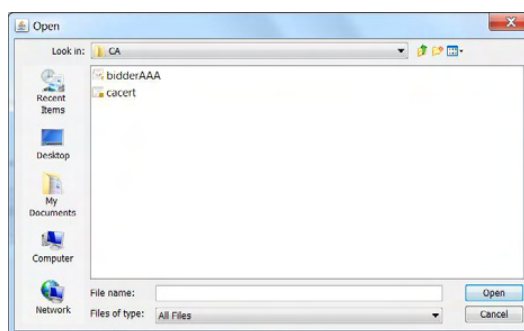
Go to the Windows Control Panel and open Java. This opens the Java Control Panel. Go to the tab Security and click on Certificates. This opens the Java Certificate Manager.



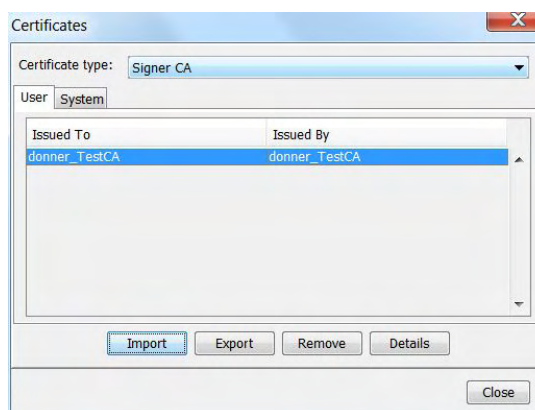
From the Certificate type menu select Signer CA and click on Import. This opens a file selection dialog.



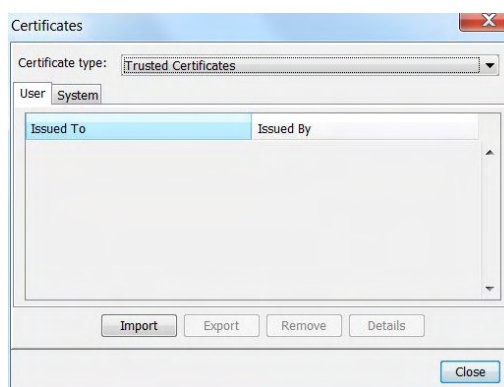
Go to the directory with your digital certificates. To see your digital certificates select All Files from the Files of type menu. Select the root certificate ('cacert') that was provided to you and click Open to install the certificate.



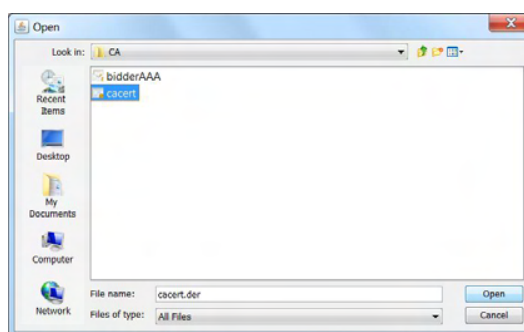
Check that you can see the root certificate on the list of Signer CA certificates.



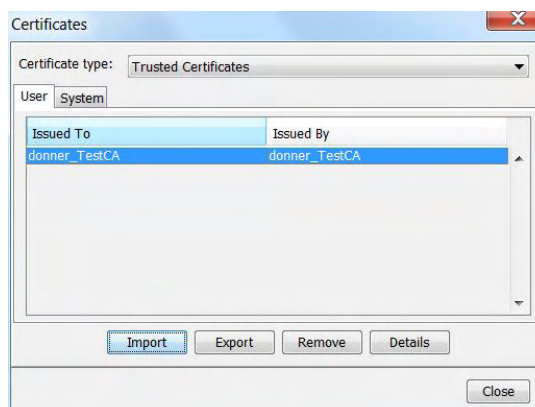
Still in Java's Certificate Manager select Trusted Certificates from the Certificate types menu. Click on Import to open the file selection dialog.



Go to the directory with your digital certificates. To see your digital certificates select All Files from the Files of type menu. Select the root certificate ('cacert') that was provided to you and click Open to install the certificate.

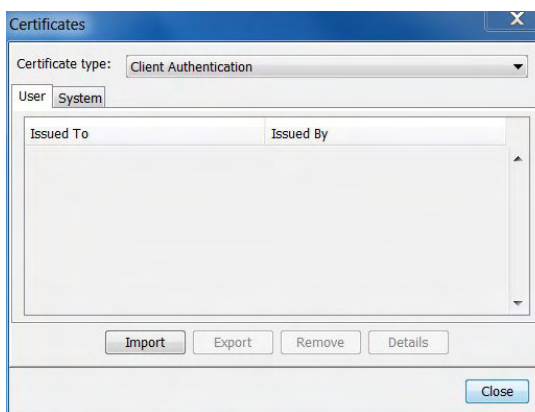


Check that you can see the root certificate on the list of Trusted Certificates.

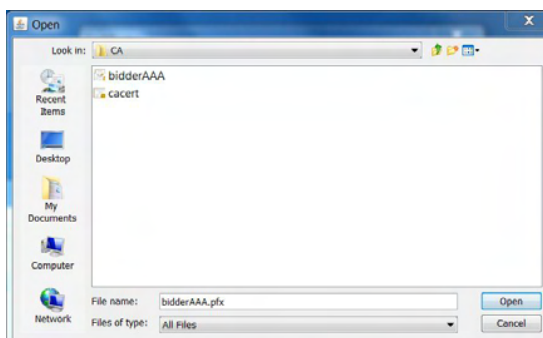


The client certificate needs to be installed as **Client Authentication**.

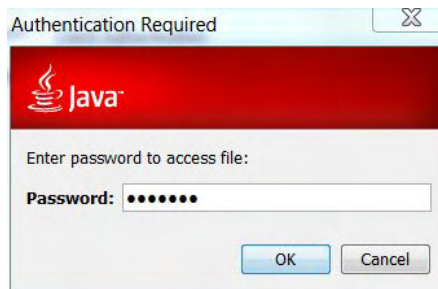
Still in Java's Certificate Manager select Client Authentication from the Certificate types menu. Click on Import to open the file selection dialog.



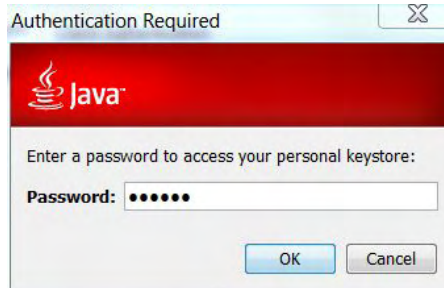
Go to the directory with your digital certificates. To see your digital certificates select All Files from the Files of type menu. Select the client certificate ('YourBidderName') that was provided to you and click Open to install the certificate.



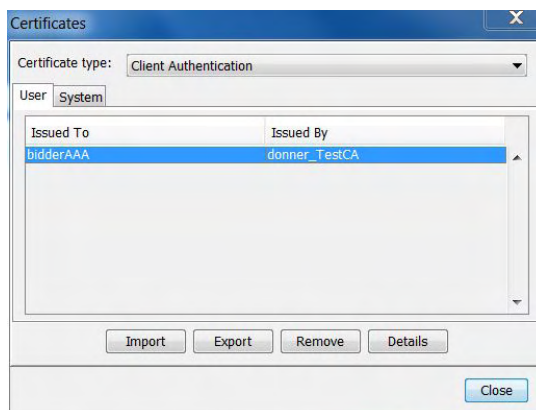
You will then be prompted for the password protecting your Client Certificate. Enter the Client Certificate password, and then click OK.



You will be asked for the password to access your personal keystore. Unless you have set one in the past, you do not need to provide a password. When logging into the EAS, you will be prompted for this password in order for the Java applet to access the server. If you have left this password blank, then you only need to click OK when prompted for it.



Check that you can see the client certificate on the list of Client Authentication.



C.6 Troubleshooting

If you experience problems using the EAS, please refer to the list of technical questions and answers below. If this does not resolve the problem, please contact ComReg for technical support.

a) The browser shows a blank page or a message that the page/server cannot be found/is not responding.

This is most likely caused by a wrong address (URL). Please check that you are using the right URL and that you have typed it correctly.

- The URL provided is case sensitive. It needs to be entered with upper and lower case characters.
- The URL needs to start with 'https://' rather than 'http://'.

b) The browser shows a message stating that access to the page has been denied.

This is most likely caused by not installing digital certificates correctly; please ensure that you have followed the installation procedures described in Section C.5 correctly.

c) The login page loads but I cannot log into the EAS.

Please check the following:

- You will receive different login details for the auction and mock-auctions.
- The login password is case sensitive. It needs to be entered with upper and lower case characters.
- Check if your Internet connection is working properly. Can you access other websites?

Please check if there are any **error messages** displayed on the login page:

- *Missing browser support:* You need to have Java, JavaScript and cookies enabled in your browser in order to be able to log in.
- *Parallel login attempt:* You may already be logged in to your account on another computer. You can only have one active session at any one time. If you are not logged in on another computer, it is possible that you have left your account without logging out properly, for example by accidentally closing your browser window. You will need to wait for approximately 1 minute until your previous session is terminated automatically before you can log in again. (Some web browsers may prevent the previous session from being terminated automatically. To avoid this you should re-start your web browser.)

d) The auction clock does not load.

You may not have Java installed on your computer or Java may be disabled for your web browser.

You need to have Java installed and enabled in order to use the EAS.

e) The timer applet does not work properly anymore, or the main frame does not match the status shown on the timer applet.

The timer applet is a Java application that runs inside your web browser. Under rare circumstances it is possible that this Java application could crash. For example, the applet might disappear, the auction clock could stop running, or auction status shown on the applet might not match the contents of the main frame.

Log out of the EAS, restart your web browser and log in again. This should restart the Java applet and resolve the issue.

If the issue persists, clear the Java Cache and reboot your computer before logging in again. This ensures that the Java Virtual Machine is completely restarted and that Java is not trying to re-use a crashed instance of the applet from its cache.

f) The time on the auction clock is different to the time on my computer.

The time on the auction clock is the time on the auction server, which is used for starting and ending rounds. All round and bid processing is done according to this time. The clock displayed on the EAS interface is therefore the 'right' time so far as the auction is concerned.

g) The EAS shows a "Failed to authenticate" error.

This may be caused by attempts to use the web browser's native 'Back' or 'Refresh' buttons to navigate the EAS. To ensure consistency and security the EAS does not allow navigation via the browser buttons. Your active session has been terminated for security reasons and you will need to start a new session.

Please restart your web browser and log in again (you may have to wait for approximately 1 minute for your previous session to be terminated before you can log in again).

h) A "Connection failed" pop-up appeared.

If your computer loses its connection to the auction server, the EAS will initially try to re-establish the connection. The connection status on your control panel will display the message "*Connection lost: retrying*". If the connection is re-established, you can continue using the EAS without interruption.

If the connection is lost and cannot be re-established immediately, a pop-up window will appear explaining the situation.

The most likely cause for a lost connection is a network problem, such as a temporary outage in your Internet connection or a very slow Internet connection.

Please restore your network connection and click 'Ok' on the pop-up message. When your connection has been restored, go to the login page and log in again (you may have to wait for approximately 1 minute for your previous session to be terminated before you can log in again).

If you lose your connection, your Internet connection might be slow or unreliable, and it may be advisable to switch to a back-up connection.

i) My bid decision has been rejected.

The EAS checks if your decision is valid and does not accept any invalid decisions.

Please read the error message provided and amend your decision accordingly before checking the decision again. Your current decision will be kept in the form, to allow for direct amendment.

Please refer to the Auction Rules for more information about validity of decisions.

j) Round results not showing in auction history

A round result is only added to your auction history after the Auctioneer releases the round results. If the Auctioneer has released the round result and it still does not appear in your history, this may be because you have not refreshed your auction history window. Refresh this window by re-launching the auction history from the control panel.

k) The window for History/Messages/Notices is not updated.

Only your main window (with the control panel on the left) is automatically updated.

All other EAS windows are not automatically updated. You can update these windows manually via the button provided in the EAS interface.

Annex A Colour coding

Throughout the auction the EAS uses a colour coding system to provide key information to Bidders about their Bids. While the colour coding at each stage of the Auction has been discussed in the relevant sections of this manual, this Annex provides a concise summary of the colour coding used in the EAS.

Auction system	Colour	Meaning
Timer	Time left highlighted in green	Round in progress with more than 10 minutes remaining until scheduled end of round
	Time left highlighted in amber	Round in progress with less than 10 minutes remaining until scheduled end of round
	Time left highlighted in blue	Bidder in extension
	Time left highlighted in red	Round expired
Round schedule	Red text	Information relating to a particular Lot Category will be displayed in red text when there was excess demand for this Lot Category in the previous round.
	Lot Category highlighted with a yellow shaded background	Lot Categories on which you placed a Bid in the previous Primary Bid Round will be highlighted with a yellow background.
Bid form	Red text	Information relating to a particular Lot Category will be displayed in red text when there was excess demand for this Lot Category in the previous round.
The table of requirements relating to a Relaxed Primary Bid	Constraining Package displayed on white background	Chain Bid for the Constraining Package is required and possible

	Constraining Package displayed on green background	You have already submitted a Bid for the Constraining Package that meets or exceeds the minimum Bid Amount (and is also below or equal to the price of the Constraining Package at the current Round Prices) required for submitting the Relaxed Primary Bid
	Constraining package displayed on red background	A Chain Bid for the Constraining Package would be required in order for the Relaxed Primary Bid to be consistent with the Relative Caps, but submitting the Chain Bid is not possible given the prevailing Round Prices
Upon checking a Bid	Red text	Information relating to a particular Lot Category will be displayed in red text when there was excess demand for this Lot Category in the previous round.
	Row highlighted with a yellow shaded background	Lot Category highlighted in yellow if you: <ul style="list-style-type: none"> • have selected a positive number of Lots for this Lot Category in a Primary Bid; • or if you have specified a positive Bid Amount for this option in the Assignment Round.
Upon submitting a Bid	Row highlighted with a yellow shaded background	Lot Category highlighted in yellow if you: <ul style="list-style-type: none"> • have selected a positive number of Lots for this Lot Category in a Primary Bid;

		<ul style="list-style-type: none"> • or if you have specified a positive Bid Amount for this option in the Assignment Round.
Primary Bid Round Results	Lot Category highlighted with a yellow shaded background	Lot Categories on which you placed a Bid in the previous Primary Bid Round will be highlighted with a yellow background.
Bid History	Package highlighted with a grey shaded background	Identifies a Chain Bid
Supplementary Bids editor	Package highlighted with a blue shaded background	Supplementary Bids for packages that constrain other Supplementary Bids are highlighted with a blue shaded background.
	Package highlighted with a yellow shaded background	Identifies the Final Primary Package

135. ComReg: to All Winning Bidders “Clarification in response to query received by ComReg” (letter dated 28 November 2012)



BY HAND

28 November 2012

Clarification in response to query received by ComReg.

Dear Winning Bidder

In accordance with the Information Memorandum (“the IM”) and Statutory Instrument 251 of 2012¹ (“the Regulations”) (see Annex 1 for relevant text), it is ComReg’s intention to issue one Liberalised Use Licence to each Winning Bidder and this Licence is to specify the Licensee’s spectrum rights (subject to the Licensee’s compliance with its Licence conditions) for the time period covered by both Time Slice 1 and Time Slice 2 in line with the outcome of the MBSA process. These spectrum rights are to be set out in Part 1 of the Licence where the commencement date and expiry date of each Spectrum Block² is to be detailed.

A Liberalised Use Licence will have a single “Licence Commencement Date” and this date will coincide with the earliest commencement date for a Spectrum Block as set out in Part 1 of a Licence.

Similarly a single “Licence Expiry Date” will be set for a Licence and this date will coincide with the latest expiry date for a Spectrum Block as set in Part 1 of a Licence. The period to which a Spectrum Usage Fee (“SUF”) payment applies will be calculated based upon this “Licence Commencement Date”³ and this date will be

¹ Wireless Telegraphy (Liberalised Use and Preparatory Licences in the 800 MHz, 900 MHz and 1800 MHz Bands) Regulations 2012.

² Given the allocation of Spectrum Blocks in two Time Slices, the potential for delayed commencement due to Transitional issues and the potential for Advanced Commencement, the commencement date of the Spectrum Blocks in a Licence may vary per spectrum band and per Spectrum Block and these may be different to the Licence Commencement Date.

³ As per the Regulations, the SUFs are to be paid prior to the grant of the Licence or prior to the anniversary of the Licence Commencement Date of each respective calendar year within the duration of the Liberalised Use Licence, as the case may be.

used to determine whether the SUFs associated with each spectrum Block require a pro-rata adjustment or not.⁴

An example is provided in Annex 2 to provide further clarification.

Yours sincerely



Dr Samuel Ritchie

⁴ As per the Regulations, the SUFs associated with a Licence are the sum of the SUFs associated with each of the Spectrum Blocks, adjusted on a pro-rata daily basis where the rights for this Spectrum Block are for a period of less than one year.

Annex 1: Relevant text from the IM and the Regulations

Section 2.2.5 of the Information Memorandum (“the IM”) describes the fees associated with a Liberalised Use Licence, and paragraphs 2.63 to 2.66 of the IM describe the Spectrum Usage Fees (“SUFs”). Amongst other things, these paragraphs state that:

- *“The SUF is an index-linked fee that is paid at defined intervals over the duration of the Licence. The first SUF is due prior to the initial grant of a Liberalised Use Licence. SUFs are due each subsequent calendar year within the duration of the Liberalised Use licence prior to the anniversary of the commencement date of the Liberalised Use Licence. SUFs are index-linked to the overall Consumer Price Index (“CPI”) as published by the Central Statistics Office of Ireland or its successor.”;*
- *“For a Liberalised Use Licence, the SUFs are the sum of the SUFs associated with each Lot included in the Liberalised Use Licence.”;*
- *“The CPI adjustment to a SUF is to be calculated using 1 February 2013 as the common base date for the CPI (i.e. CPI = 100).”;* and
- *“Where a Liberalised Use Licence is granted for a period of less than one year, the SUF shall be calculated using the above methodology and adjusted on a pro rata daily basis.”*

Statutory Instrument 251 of 2012⁵ (“the Regulations”) sets out the requirements for the payment of the Liberalised Use Licence fees, and amongst other things:

- Regulation 8(4) provides that the SUF for a Liberalised Use Licence is the sum of the SUFs associated with each Spectrum Block in the Liberalised Use Licence;
- Regulation 8(5) sets out the annual SUFs payable and clarifies that, where a SUF is due for a period of less than 1 year, the SUF will be adjusted on a pro rata daily basis for such period;
- Regulation 8(8) provides that a Spectrum Usage Fee (SUF) must be paid to ComReg prior to the grant of a Liberalised Use Licence or prior to the anniversary of the Licence Commencement Date of each respective calendar year within the duration of the Liberalised Use Licence, as the case may be;
- Schedule 1 to the Regulations sets out the form of the Liberalised Use Licence;
 - The “Licence Commencement Date” and the “Licence Expiry Date” associated with the Liberalised Use Licence are to be set out on the first page of a Licence; and
 - The Spectrum Blocks associated with a Licence and the commencement date and expiry date of each Spectrum Block is to be set out in Part 1 to the Licence. The commencement date and expiry date of each Spectrum Block is to be set in line with the outcome of the MBSA process⁶; and
- Regulation 6(6) makes it a condition of a Licence that the Licensee pay the fees as set out in Regulation 8 of the Regulations.

⁵ Wireless Telegraphy (Liberalised Use and Preparatory Licences in the 800 MHz, 900 MHz and 1800 MHz Bands) Regulations 2012.

⁶ The commencement date for some Spectrum Blocks may only be determined following the implementation of the finalised Transition Project Plan.

Annex 2: Example of a SUF payment schedule

In this example it is assumed that a Winning Bidder has won two Spectrum Blocks in the 800 MHz and 900 MHz bands in both Time Slice 1 and Time Slice 2, and two Spectrum Blocks in the 1800 MHz band in Time Slice 2 only (see table below)

	Spectrum Blocks won in TS1	Spectrum Blocks won in TS2
800 MHz band	2 Blocks (A & B)	2 Blocks (A & B)
900 MHz band	2 Blocks (C & D)	2 Blocks (C & D)
1800 MHz band	0 Blocks	2 Blocks (E & F)

Given the allocation of Spectrum Blocks in two Time Slices, Transitional issues and the potential for Advanced Commencement, the commencement date of the Spectrum Blocks in a Licence may vary per spectrum band and per Spectrum Block.

In this example the following commencement and expiry dates for each Spectrum Block are assumed.

Spectrum band	Spectrum Block	Commencement Date of Spectrum Block	Expiry Date of Spectrum Block
800 MHz band	A	1 February 2013	12 July 2030
	B	1 February 2013	12 July 2030
900 MHz band	C	1 February 2013	12 July 2030
	D	1 March 2013	12 July 2030
1800 MHz band	E	13 July 2015	12 July 2030
	F	13 July 2015	12 July 2030

As the earliest commencement date for a Spectrum Block in this Licence is 1 February 2013, the **Licence Commencement Date** of this Licence will be 1 February 2013.

Given this Licence Commencement Date, and assuming that the Licence runs for its full duration, the annual SUF periods in this example can now be defined. These are set out in the Table below.

SUF Period	Dates in the SUF period
SUF period 1	1 February 2013 to 31 January 2014
SUF period 2	1 February 2014 to 31 January 2015
SUF period 3	1 February 2015 to 31 January 2016
.....
Last SUF period	1 February 2030 to 12 July 2030

As set out in the IM and the Regulations, the SUFs associated with a Licence is the sum of the SUFs associated with each Spectrum Block in the Licence adjusted on a pro-rata daily basis where the rights with this Spectrum Block are for a period of less than one year.

Given the SUF periods and the commencement and expiry date of each Spectrum Block, the SUFs (before indexation) for each SUF period can now be calculated.

For this example, the table below sets out the Spectrum Blocks that will be included in each SUF period, noting that the SUFs for certain Spectrum Blocks will need to be adjusted for a period of less than 1 year.

Spectrum band	Spectrum Block	SUF Period 1	SUF Period 2	SUF Period 3	....	Last SUF Period
800 MHz band	A	Full Year	Full Year	Full Year	....	162 Days of Year ⁷
	B	Full Year	Full Year	Full Year	....	162 Days of Year
900 MHz band	C	Full Year	Full Year	Full Year	....	162 Days of Year
	D	337 days of Full Year ⁸	Full Year	Full Year	....	162 Days of Year
1800 MHz band	E	N/A	N/A	203 Days of Full Year ⁹	....	162 Days of Year
	F	N/A	N/A	203 Days of Full Year	....	162 Days of Year

⁷ From 1 February 2030 until 12 July 2030

⁸ From 1 March 2013 until 31 January 2014.

⁹ From 13 July 2015 until 31 January 2016

136. ComReg: letter to DCENR “ComReg’s Multi-Band Spectrum Award (MBSA process)” (letter dated 1 October 2012)



01st October 2012

Ms Katherine Licken
Department of Communications, Energy & Natural Resources
29/31 Adelaide Road
Dublin 2

Dear Katherine,

I refer to recent press coverage recently regarding ComReg's Multi-Band Spectrum Award (MBSA) process.

As you will be aware, ComReg has implemented a very strict communications policy, both for itself and for participants, during the course of the MBSA process. In that regard, I might draw your particular attention to section 5.2.4 of the Information Memorandum (Document 12/52) entitled "Publicity".

We have reason to believe that one or more interested parties might wish to contact the Department to discuss aspects of the Information Memorandum and/or MBSA process.

Given the terms of the Information Memorandum and the very sensitive and critical stage that the MBSA process is in, we would be grateful if you might encourage Department officials to:

- not enter into in any such discussions on the basis that these interested parties, if they are participating in the MBSA process, might not be complying with the terms of the Information Memorandum (which they have agreed to comply with) and, indeed, be involving the Department in discussions which breach of the terms of the Information Memorandum;
- instead remind any such interested parties of the above-mentioned communications policy in the Information Memorandum; and
- request any such interested parties to raise any issues they might have with the Information Memorandum and/or the MBSA process with ComReg directly via the proper communications channels identified in the Information Memorandum.

We are grateful for the Department's assistance in managing this key project to date and particularly now as we move toward finalisation.

Kind regards



George Merrigan
Director Market Framework

An Coimisiún um Rialáil Cumarsáide
Commission for Communications Regulation
Abbey Court Irish Life Centre Lower Abbey Street Dublin 1 Ireland
Telephone +353 | 804 9600 Fax +353 | 804 9665 Email info@comreg.ie Web www.comreg.ie

137. DCENR: letter to ComReg “letter of 1 October” (letter dated 16 October 2012)



**An Roinn Cumarsáide,
Fuinnimh agus Acmhainní Náúúrtha
Baile Átha Cliath 2.**

**Department of Communications,
Energy and Natural Resources,
Dublin 2.**

16th October 2012

Mr. George Merrigan,
Director Market Framework,
Commission for Communications Regulation,
Abbey Court,
Irish Life Centre,
Lower Abbey Street, *Dublin 1*
Dublin 1.

Dear George,

I wish to confirm that the Department has noted the contents of your letter of 1 October regarding the Multi-band Spectrum Award (MBSA) process.

Given that it has been Government policy for some time that regulation should be carried out by statutorily independent bodies and that it was a decision of the Government to assign the function of overseeing the spectrum licence award process to ComReg, the Department is fully aware of the need for the process to be run exclusively by ComReg and in this regard I wish to assure you that officials will not enter into discussions with any third parties interested in the MBSA process and if approaches are made by such parties to enter into such discussions they will be advised to raise any issues they have with ComReg directly via the proper communication channels identified in the Information Memorandum.

Yours sincerely,

A handwritten signature in cursive script, appearing to read 'Katherine'.

Katherine Licken