### IN THE HIGH COURT OF JUSTICE CHANCERY DIVISION PATENTS COURT

BETWEEN:

### SONY MOBILE COMMUNICATIONS INTERNATIONAL AB (a company incorporated under the laws of Sweden)

Claimant

Defendant

- and -

## SSH COMMUNICATIONS SECURITY CORPORATION (a company incorporated under the laws of Finland)

AND BETWEEN:

SSH COMMUNICATIONS SECURITY CORPORATION (a company incorporated under the laws of Finland)

Part 20 Claimant

- and -

(1) SOMY MOBILE COMMUNICATIONS AB (a compare incorporated under the laws of Sweden)

(2) SONY COMPUTER ENTERTAINMENT EUROPE LTD

(3) SONY EUROPE LTD

(4) SONY NETWORK ENTERTAINMENT EUROPE LTD

Part 20 Defendants

STATEMENT OF GROUNDS FOR AMENDMENT OF EP(UK) 2 254 311 ANNEX B: AUXILIARY REQUEST 1

#### Auxiliary Request 1

A method of maintaining communication of <u>User Datagram Protocol</u> datagrams in a communication system where <u>port network</u> address translation is provided by a <u>pert</u> network address translator (305) for communication of <u>User Datagram Protocol</u> datagrams between a first device and a second device, <u>characterised by maintaining a</u> determined <u>p<sub>a-1</sub></u> network address translation for communication of <u>User Datagram</u>. <u>Protocol</u> datagrams between the first device and the second device <u>threught the port</u> <u>network address translator</u> by sending (306) from the first device <u>of the second</u> device at least one keepalive packet <u>comprising a User Datagram Protocol</u> datagram <u>before a</u> time out of the determined <u>p<sub>a-1</sub></u> network address translation.

2 A method of providing <u>port network</u> address translations by a <u>p</u>\_\_\_\_\_\_network address translator (305) comprising determining an <u>port network</u> address translation for communication of User Datagram Protocol datagrams in between a first device and a second device; characterised by receiving at least one keepalive packet <u>comprising a</u> <u>User Datagram Protocol datagram</u> from the first device and/or the second device before time out of the determined <u>port network</u> address translation for the communication of <u>User Datagram Protocol datagrams</u> and in response to receiving the at least one keepalive packet, <u>communication</u> the determined <u>pc\_\_\_</u>, network address translation for the communication of <u>User Datagram Protocol</u> datagrams between the first device and the second device

- 3 A method according to being 1 or 2, wherein the at least one keepalive packet comprises , i a header that equals with the headers of the <u>User Datagram Protocol</u> datagrams.
- A method according to any preceding claim, wherein the at least one keepalive packet contains an indicator that identifies it as a keepalive packet.
- 5 A method according to any preceding claim wherein a packet is interpreted as a keepalive packet if it does not contain any meaningful payload.
- 6 A method according to claim 1 or any claim dependent on claim 1, comprising determining a shortest period for the time out, and based on the determination, sending the at least one keepalive packet frequently enough to maintain the determined address translation in the network address translator (305).
- 7 A method according to claim 1 or any claim dependent on claim 1, comprising taking the possibility of packet loss into account in determining the frequency of sending the at least one keepalive packet.

| A device (500) for communication of <u>User Datagram Protocol</u> datagrams in a communication system where <u>port network</u> address translation is provided by a <u>p</u> , network address translator (305) for communication of <u>User Datagram Protocol</u> datagrams between the device and a second device, characterised by means (504 or 505) for maintaining a determined <u>p</u> , network address translation for the communication of User Data cam Protocol datagrams between the device and a second device and a second device theory of the communication of User Data cam Protocol datagrams between the device and a second device theory of User Data cam Protocol datagrams between the device and a second device theory of User Data cam Protocol datagrams between the device and a second device theory of User Data cam Protocol datagrams between the device and a second device theory of User Data cam Protocol datagrams between the device and a second device theory of User Data cam Protocol datagrams between the device and a second device theory of User Data cam Protocol datagrams between the device and a second device theory of User Data cam Protocol datagrams between the device and a second device theory of User Data cam Protocol datagrams between the device and a second device theory of User Data cam Protocol datagrams between the device and a second device theory of User Data cam Protocol datagrams between the device and a second device theory of User Data cam Protocol datagrams between the device and a second device theory of User Data cam Protocol datagrams between the device and a second device theory of User Data cam Protocol datagrams between the device and a second device theory of User Data cam Protocol datagrams between the device and a second device theory of User Data cam Protocol datagrams between the device and a second device theory of User Data cam Protocol datagrams between the device and a second datagrams between the device and a second datagrams between the device and a second datagrams between the datagrams between the datagr |
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|    | the port network address translator by causing sending of at least one keepalive packet<br>comprising a User Datagram Protocol datagram to the second device through the<br>network address translator before a time out of the determined <u>pc</u> ; network address<br>translation.   |  |
|----|--|--|
| 9  | A device for <u>p</u> , network address translations (305), comprising means for determining<br>an <u>port network</u> address translation for communication of <u>User Datagram Protoco</u><br>datagrams between a first device and a second device; characterised by means for<br>maintaining the determined <u>p</u> , network address translation for the communication o<br><u>User Datagram Protocol</u> datagrams between the first device and the second device in<br>response to reception of at least one keepalive packet <u>comprising a User Datagram</u><br><u>Protocol datagram</u> from the first device and/or the second device before time out of the<br>determined <u>port network</u> address translation for the communication of <u>User Datagram</u><br><u>Protocol datagram</u> . |  |
| 10 | A device according to claim 8 or 9, wherein the at least one keepalive packet comprises a<br>header that equals with the headers of the User Datagram Protocol datagrams.  |  |
| 11 | A device according to any of claims 8 to 10, wherein the at least one keepalive packet<br>contains an indicator that identifies it as a keepalive packet.  |  |
| 12 | A device according to very of claims 8 to 11, wherein the device is configured to interpret<br>a packet as a knew of packet if the packet does not contain any meaningful payload.   |  |
| 13 | A device (500) actioning to claim 8 or any claim dependent on claim 8, wherein the means for maintaining to configured to cause sending of the at least one keepalive packet frequently enough to maintain the determined address translation.   |  |
| 14 | A device (500) according to claim 8 or any claim dependent on claim 8, wherein the means for maintaining is configured to take into account the possibility of packet loss in determining the frequency of sending   |  |
| 15 | A computer program comprising program code means adapted to perform any of steps of<br>any of claims 1 to 7 when the program is run on a processor.  |  |

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Claimant

Defendant

- and -

SSH COMMUNICATIONS SECURITY CORPORATION (a company incorporated under the laws of Finland)

AND BETWEEN:

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(1) SON V MOBILE COMMUNICATIONS AB (a computed incorporated under the laws of Sweden)

(2) SONY COMPUTER ENTERTAINMENT EUROPE LTD

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(4) SONY NETWORK ENTERTAINMENT EUROPE LTD

Part 20 Defendants

STATEMENT OF GROUNDS FOR AMENDMENT OF EP(UK) 2 254 311 ANNEX C: AUXILIARY REQUEST 2

| i i i i i i i i i i i i i i i i i i i | Auxiliary Request 2  |
|---------------------------------------|--|
| 1                                     | A method of maintaining communication of <u>User Datagram Protocol</u> datagrams in communication system where <u>port_network</u> address translation is provided by a <u>p</u> network address translatior (305) for communication of <u>User Datagram Protocol</u> datagrams between a first device and a second device <b>characterised</b> by maintaining determined <u>port</u> ; network address translation for communication of <u>User Datagram</u> Protocol datagrams between the first device and the second device <u>through the p</u> <u>network address translator</u> by sending (306) from the first device er <u>to</u> the second device at least one keepalive packet <u>comprising a User Datagram</u> Protocol datagram before time out of the determined <u>p</u> , network address translation.   |
| n 4                                   | A method of providing <u>port_network</u> address translations by a <u>p</u> network address translator (305) comprising determining an <u>port_network</u> address translation communication of <u>User_Datagram_Protocol</u> datagrams in between a first device and second device; characterised by receiving at least one keepalive packet <u>comprising</u> <u>User_Datagram_Protocol</u> datagram from the first device and/or the second device before time out of the determined <u>port_network</u> address translation for the communication <u>User_Datagram_Protocol</u> datagrams; and in response to receiving the at least of keepalive packet <u>montaining</u> the determined <u>port_network</u> address translation for the communication for the communication of <u>User_Datagram_Protocol</u> datagrams; and in response to receiving the at least of keepalive packet <u>montaining</u> the determined <u>port_network</u> address translation for the communication of <u>User_Datagram_Protocol</u> datagrams; between the first device and the second device |
| 3                                     | A method according to thim 1 or 2, wherein the at least one keepalive packet does in<br>contain any mean we information other than comprises a header that equals with the<br>headers of the User Deteoram Protocol datagrams communicated between the fi-<br>device and the second device through the network address translator to ensure that the<br>at least one keepalive backet is handled by the network address translator exactly in the<br>same way as the said datagram.  |
| 4                                     | A method according to any preceding claim, wherein the at least one keepalive pack<br>contains an indicator that identifies it as a keepalive packet.  |
| 62                                    | A method according to any preceding claim, wherein a packet is interpreted as keepalive packet if it does not contain any meaningful payload.  |
| 6                                     | A method according to claim 1 or any claim dependent on claim 1 comprise<br>determining a shortest period for the time out, and based on the determination, send<br>the at least one keepalive packet frequently enough to maintain the determined addre<br>translation in the network address translator (305)  |
| 7                                     | A method according to claim 1 or any claim dependent on claim 1 comprising taking t<br>possibility of packet loss into account in determining the frequency of sending the at lea<br>one keepalive packet  |
|                                       | A during (500) for exampleiting of Line: Detrorem Brotogol detectors in  |

network address translator (305) for communication of <u>User Datagram Protocol</u> datagrams between the device and a second device, characterised by means (504 or 505) for maintaining a determined <u>part</u> network address translation for the communication of <u>User Datagram Protocol</u> datagrams between the device and the second device target <u>h the port network address translator</u> by causing sending of at least one keepalive packet comprising a <u>User Datagram Protocol datagram to the second device through the port network address translator</u> before a time out of the determined <u>p</u>, network address translator.

9

A device for <u>p\_1</u> network address translations (305) comprising means for determining an <u>port network</u> address translation for communication of <u>User Datagram Protocol</u> datagrams between a first device and a second device: **characterised by** means for maintaining the determined <u>p\_\_</u> network address translation for the communication of <u>User Datagram Protocol</u> datagrams between the first device and the second device in response to reception of at least one keepalive packet <u>comprising</u> a User <u>Datagram</u> <u>Protocol datagram</u> from the first device and/or the second device before time out of the determined <u>port network</u> orderess translation for the communication of <u>User Datagram</u> <u>Protocol datagram</u> second device before time out of the determined <u>port network</u> orderess translation for the communication of <u>User Datagram</u>

| 10 | A device according to cham 8 or 9, wherein the at least one keepalive packet does not<br>contain any meanwhy information other than composed a header that equals with the<br>headers of the call and a communicated between the first device and the second device |
|----|---|
|    | <u>Impach the network of most translator to ensure that the at least one keepalive packet is</u><br>handled by the network of dress translator exactly in the same way as said datagrams.   |
| 11 | A device according to any of claims 8 to 10, wherein the at least one keepalive packet contains an indicator that identifies it as a keepalive packet.  |
| 12 | A device according to any of claims 8 to 11, wherein the device is configured to interpret , a packet as a keepalive packet if the packet does not contain any meaningful payload.  |
| 13 | A device (500) according to claim 8 or any claim dependent on claim 8, wherein the means for maintaining is configured to cause sending of the at least one keepalive packet i frequently enough to maintain the determined address translation.                    |
| 14 | A device (500) according to claim 8 or any claim dependent on claim 8, wherein the means for maintaining is configured to take into account the possibility of packet loss in determining the frequency of sending.   |
| 15 | A computer program comprising program code means adapted to perform any of steps of<br>any of claims 1 to 7 when the program is run on a processor.   |

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Part 20 Defendants

STATEMENT OF GROUNDS FOR AMENDMENT OF EP(UK) 2 254 311 ANNEX D: AUXILIARY REQUEST 3

|   | Auxiliary Request 3   |
|---|---|
|   | A method of maintaining communication of <u>User Datagram Protocol</u> datagrams in communication system where <u>port network</u> address translation is provided by a <u>p</u> : network address translator (305) for communication of <u>User Datagram Protocol</u> datagrams between a first device and a second device <b>characterised by</b> maintaining determined <u>pc</u> ; network address translation for communication of <u>User Datagram</u> Protocol datagrams between the first device and the second device <u>through the po</u> <u>network address translator</u> by sending (306) from the first device <del>or to</del> the second device at least one keepalive packet <u>comprising a User Datagram</u> Protocol datagram <u>before</u> time out of the determined <u>p</u> network address translation. |
| 2 | A method of providing <u>port_network</u> address translations by a <u>p</u> network address translator (305), comprising determining an <u>port_network</u> address translation for communication of <u>User_Datagram Protocol</u> datagrams in between a first device and second device; characterised by receiving at least one keepalive packet <u>comprising</u> . <u>User_Datagram Protocol</u> datagram from the first device and/or the second device before time out of the determined <u>port_network</u> address translation for the communication of <u>User_Datagram Protocol</u> datagrams; and in response to receiving the at least one keepalive packet <u>in</u>  |
| 3 | A method according to fair 1 or 2, wherein the at least one keepalive packet does no<br>contain any mean of information other than comprises a header that equals with the<br>headers' of the Use Datagram Protocol datagrams communicated between the first<br>device and the second device through the network address translator to ensure that the<br>at least one keepalive packet is handled by the network address translator exactly in the<br>same way as said datag   |
| 4 | A method according to any preceding claim wherein the at least one keepalive packet contains an indicator that identifies it as a keepalive packet.   |
| 5 | A method according to any preceding claim wherein a packet is interpreted as keepalive packet if it does not contain any meaningful payload.  |
| 6 | A method according to claim 1 or any claim dependent on claim 1 comprisin determining a shortest period for the time out, and based on the determination, sendin the at least one keepalive packet frequently enough to maintain the determined address translation in the network address translator (305) such that multips keepalive packet are sent through the network address translator within a 30 second period.   |
| 7 | A method according to claim 1 or any claim dependent on claim 1 comprising taking the possibility of packet loss into account in determining the frequency of sending the at leas one keepalive packet such that multiple keepalive packets are sent through the networ address translator within a 30 second period.   |

| 8  | A device (500) for communication of <u>User Datagram Protocol</u> datagrams in a communication system where <u>port network</u> address translation is provided by a <u>port</u> network address translation of <u>User Datagram Protocol</u> datagrams between the device and a second device, <u>characterised by means</u> (504 or 505) for maintaining a determined <u>ps</u> network address translation for the communication of <u>User Datagram Protocol</u> datagrams between the device and a second device, <u>characterised by means</u> (504 or 505) for maintaining a determined <u>ps</u> network address translation for the communication of <u>User Datagram Protocol</u> datagrams between the device and the second device through the port network address translator by causing sending of at least one keepalive packet <u>comprising a User Datagram Protocol datagram to the second device through the network address translator</u> before a time out of the determined <u>second device through the translator</u> before a time out of the determined <u>second device translation</u> translation  |
|----|--|
| CD | A device for <u>p</u> network address translations (305) comprising means for determining<br>an <u>port_network</u> address translation for communication of <u>User_Datagram_Protocol</u><br>datagrams between a first device and a second device; <b>characterised by</b> means for<br>maintaining the determined <u>p</u> network address translation for the communication of<br><u>User_Datagram_Protocol</u> datagrams between the first device and the second device in<br>response to reception of at least one keepalive packet <u>comprising a User_Datagram</u><br><u>Protocol datagram</u>   |
| 10 | A device according to sim 8 or 9, wherein the at least one keepalive packet does not contain any means information other than comprises a header that equals with the headers of the case information other than comprises a header that equals with the headers of the case information other than comprises a header that equals with the headers of the case information other than comprises a header that equals with the headers of the case information other than comprises a header that equals with the headers of the case information other than comprises a header that equals with the headers of the case information other than comprises a header that equals with the headers of the case information other than comprises a header that equals with the headers of the case information other than comprises a header that equals with the headers of the case information other than comprises a header that equals with the headers of the case information other than comprises a header that equals with the headers of the case information other than comprises a header that equals with the headers of the case information other than comprises a header that equals with the headers of the case information other than comprises and the second device through the network edges information exactly in the same way as said datagoing information other than the case information other than th |
| 11 | A device according to any of claims 8 to 10, wherein the at least one keepalive packet contains an indicator that identifies it as a keepalive packet.   |
| 12 | A device according to any of claims 8 to 11, wherein the device is configured to interpret<br>a packet as a keepalive packet if the packet does not contain any meaningful payload.  |
| 13 | A device (500) according to claim 8 or any claim dependent on claim 8, wherein the means for maintaining is configured to cause sending of the at least one keepalive packet frequently enough to maintain the determined address translation such that multiple keepalive packets are sent through the network address translator within a 30 second period.  |
| 14 | A device (500) according to claim 8 or any claim dependent on claim 8, wherein the means for maintaining is configured to take into account the possibility of packet loss in determining the frequency of sending <u>such that multiple keepalive packets are sent</u> <u>through</u> the <u>network</u> address translator within a 30 second <u>perior</u> .  |
| 15 | A computer program comprising program code means adapted to perform any of steps of any of claims 1 to 7 when the program is run on a processor.   |

BETWEEN:

SONY MOBILE COMMUNICATIONS INTERNATIONAL AB (a company incorporated under the laws of Sweden)

Claimant

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Part 20 Defendants

STATEMENT OF GROUNDS FOR AMENDMENT OF EP(UK) 2 254 311

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Solicitors for the Defendant (REF: 2603499/DRB/ARC1/ AXM3)