**UNITED STATES DISTRICT COURT**
**FOR THE EASTERN DISTRICT OF TEXAS**
**MARSHALL DIVISION**

| | | |
|---|---|---|
| NETWORK SYSTEM TECHNOLOGIES, LLC, | ) | |
| | ) | |
| Plaintiff, | ) | |
| | ) | |
| v. | ) | |
| | ) | |
| SAMSUNG ELECTRONICS CO., LTD.; | ) | Civil Action No. 2:22-CV-00481-JRG |
| SAMSUNG ELECTRONICS AMERICA, INC.; | ) | |
| SAMSUNG AUSTIN SEMICONDUCTOR, | ) | **JURY TRIAL DEMANDED** |
| LLC; SAMSUNG SEMICONDUCTOR, INC., | ) | |
| | ) | |
| Defendants. | ) | |
| | ) | |

**LOCAL PATENT RULE 4-3**
**JOINT CLAIM CONSTRUCTION AND PREHEARING STATEMENT**

Pursuant to the Court's Docket Control Order (Dkt. 59) and P.R. 4-3, Plaintiff Network System Technologies, LLC ("Plaintiff" or "NST") and Defendants Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., Samsung Austin Semiconductor, LLC, and Samsung Semiconductor, Inc. (collectively, "Defendants") hereby submit their Joint Claim Construction and Prehearing Statement regarding U.S. Patent Nos. 7,366,818 ("'818 patent"), 7,373,449 ("'449 patent"), 7,594,052 ("'052 patent"), 7,769,893 ("'9893 patent"), 8,072,893 ("'2893 patent"), and 8,086,800 ("'800 patent") (collectively, "Asserted Patents"). *See, generally*, Dkt 1, Exs. 1–6.

## I. P.R. 4-3(1): AGREED UPON CONSTRUCTIONS

The parties attach a chart hereto as Appendix 1, which shows the parties' agreed upon construction of certain claim terms, phrases, and clauses.

## II. P.R. 4-3(2): EACH PARTY'S PROPOSED CONSTRUCTIONS

The parties attach a chart hereto as Appendix 2, which shows each party's proposed construction of each disputed claim term, phrase, or clause. The parties also attach charts hereto as Appendices 3–4, which show each party's identification of all references from the specification or prosecution history that support that construction, and an identification of any extrinsic evidence known to the party on which it intends to rely either to support its proposed construction or to oppose any other party's proposed construction, including but not limited to, as permitted by law, dictionary definitions, citations to learned treatises and prior art, and testimony of percipient and expert witnesses.

## III. P.R. 4-3(3): ANTICIPATED TIME REQUESTED FOR THE CLAIM CONSTRUCTION HEARING

The parties anticipate a combined total of 4 hours for presentation at the hearing.

## IV. P.R. 4-3(4): WITNESSES AT THE HEARING

NST currently anticipates calling witnesses. Defendants do not believe that witnesses are necessary at the hearing but may call witnesses if NST maintains its current position.

## V. P.R. 4-3(5): OTHER MATTERS TO CONCURRENTLY ADDRESS

The parties are unaware of any issues that would be appropriate for a prehearing conference.

Date: January 9, 2024

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**CERTIFICATE OF SERVICE**

I hereby certify that the foregoing document was filed electronically in compliance with Local Rule CV-5(a). As such, this document was served on all counsel of record via electronic mail on this January 9, 2024.

/s/ Vincent C. Capati

# APPENDIX 1

## Agreed Upon Constructions

### A. Terms Common to Multiple Asserted Patents

| Term or Phrase & Asserted Patent(s) and Claim(s) | Agreed Upon Constructions |
|---|---|
| "connection properties"<br><br>'449 patent: claims 10, 13–16<br>'052 patent: claims 1, 3–7<br>'9893 patent: claims 4, 6, 8 | "properties of a connection, including ordering (data transport in order), flow control (a remote buffer is reserved for a connection, and a data producer will be allowed to send data only when it is guaranteed that space is available for the produced data), throughput (a lower bound on throughput is guaranteed), latency (upper bound for latency is guaranteed), the lossiness (dropping of data), transmission termination, transaction completion, data correctness, priority, or data delivery" |
| "flow control"<br><br>'449 patent: claims 5, 13<br>'9893 patent: claim 8<br>'800 patent: claim 12 | "controlling flow whereby a remote buffer is reserved for a connection, and a data producer will be allowed to send data only when it is guaranteed that space is available for the produced data" |
| "network"<br><br>'818 patent: claims 1, 2<br>'449 patent: claims 1, 4, 9–12, 14<br>'052 patent: claims 1–2, 6–7<br>'9893 patent: claims 1, 3–4, 11<br>'2893 patent: claims 1, 10 | "multi-hop interconnection between modules separated by one or more network nodes" |
| "integrated circuit" | "interconnected circuitry on a chip" |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Agreed Upon Constructions |
|---|---|
| ’818 patent: claims 1–3, 5–7<br>’449 patent: claims 1–6, 9–16<br>’052 patent: claims 1–7<br>’9893 patent: claims 1–11<br>’2893 patent: claims 1, 10<br>’800 patent: claim 12 | |

**B. ’818 Patent**

| Term or Phrase & Asserted Patent and Claim(s) | Agreed Upon Constructions |
|---|---|
| Whether the preamble is a limitation<br>(“Integrated circuit comprising . . . from the second modules to the first module” 12:5-16)<br><br>’818 patent: claim 1 | Limiting |

**C. ’449 Patent**

| Term or Phrase & Asserted Patent and Claim(s) | Agreed Upon Constructions |
|---|---|
| Whether the preamble is a limitation<br>(“Method for exchanging messages . . . the second module to the first module” 19:21-30)<br>’449 patent: claim 10 | Limiting |

| Term or Phrase & Asserted Patent and Claim(s) | Agreed Upon Constructions |
|---|---|
| "resource manager"<br><br>'449 patent: claims 1, 6, 10, 14–15 | Plain and ordinary meaning |
| "at least one connection with said communication channels is available" / "a target connection with the desired connection properties is available"<br><br>'449 patent: claim 1, 10 | Plain and ordinary meaning |

**D. '052 Patent**

| Term or Phrase & Asserted Patent and Claim(s) | Agreed Upon Constructions |
|---|---|
| Whether the preamble is a limitation<br>("Method of communication service mapping . . . second processing modules (S)" 10:7-18)<br>'052 patent: claim 6 | Limiting |

**E. '9893 Patent**

| Term or Phrase & Asserted Patent and Claim(s) | Agreed Upon Constructions |
|---|---|
| Whether the preamble is a limitation<br>("A method . . . or a register address" 12:40-53)<br>'9893 patent: claim 4 | Limiting |

**F. ’2893 Patent**

| Term or Phrase & Asserted Patent and Claim(s) | Agreed Upon Constructions |
|---|---|
| Whether the preamble is a limitation<br>(“A method of designing circuits . . . via a network interface” 12:22-33)<br>’2893 patent: claim 10 | Limiting |

# APPENDIX 2

## Disputed Terms for Construction

### A. ’818 Patent

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff’s Proposed Constructions | Defendants’ Proposed Constructions | Claim Dispositive |
|---|---|---|---|
| “interface means” /<br><br>“interface means (ANIP, PNIP) for managing the interface between a module (M, S) and the network (N, RN) wherein said interface means (ANIP, PNIP) comprises a first dropping means (DM) for dropping data, and wherein the dropping of data and therefore the transaction completion can be controlled by the interfaces means”<br><br>’818 patent: claims 1, 6, 7 | “interface circuit that connects a module to a network” /<br><br>NST incorporates its definitions for the terms “interface means,” “network,” and “dropping means.” The remaining parts of this term should be afforded their plain and ordinary meanings.<br><br>NST disagrees that this term is governed by Section 112, ¶ 6. Nevertheless, if the Court holds that this term is so governed, NST proposes the following construction:<br><br>**Function**: With respect to claim 1, “manage the interface between a module and the | Subject to Section 112 ¶ 6.<br><br>**Function**:<br>- Claim 1, “managing the interface between a module (M, S) and a network (N, RN) and controlling dropping of data and transaction completion.”<br>- Claim 6, “store received error messages”<br>- Claim 7, “not drop error messages”<br><br>**Structure**: portion of the circuit configured to implement the scheme disclosed in the ’818 patent at 7:57–8:63, 9:10–49 and the structure of the claimed dropping means. | Yes, if held indefinite. |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff's Proposed Constructions | Defendants' Proposed Constructions | Claim Dispositive |
|---|---|---|---|
| | network, and control the dropping of data and therefore the transaction completion"<br><br>With respect to claim 6, the function according to claim 1 and "store received error messages"<br><br>With respect to claim 7, the function according to claim 1 and "not drop error messages"<br><br>**Structure**: "circuit" | Otherwise, indefinite. | |
| "dropping means (DM) for dropping data exchanged by said first and second module (M, S)"<br><br>'818 patent: claims 1, 3, 5 | "dropping means" means "circuit configured to drop data," the remaining language should be afforded their plain and ordinary meanings.<br><br>NST disagrees that this term is governed by Section 112 ¶ 6. Nevertheless, if the Court holds that this term is so governed, NST proposes the following construction: | Subject to Section 112 ¶ 6.<br><br>**Function**:<br>- Claim 1, **"**dropping data exchanged by first and second module (M, S)"<br>- Claim 3, "create an error message if data is dropped"<br>- Claim 5, "send said error message to said first module" | Yes, if held indefinite. |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff's Proposed Constructions | Defendants' Proposed Constructions | Claim Dispositive |
|---|---|---|---|
| | **Function**: With respect to claim 1, "drop data exchanged by said first and second module"<br><br>With respect to claim 3, the function according to claim 1 and "create an error message if data is dropped"<br><br>With respect to claim 5, the function according to claim 3 and "send said error message to said first module"<br><br>**Structure**: "circuit" | **Structure**: portion of the circuit configured to implement the scheme disclosed in the '818 Patent at 7:45–56, 8:38–40, 8:64–9:10.<br><br>Otherwise, indefinite. | |

**B. '449 Patent**

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff's Proposed Constructions | Defendants' Proposed Constructions | Claim Dispositive |
|---|---|---|---|
| "communication manager [(CM) for managing the communication between different modules" | "communication manager" means "circuit that manages communication between modules" and the remaining language should be afforded | Subject to Section 112 ¶ 6.<br><br>**Function**: forwarding a request to a resource manager | Yes, if held indefinite. |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff's Proposed Constructions | Defendants' Proposed Constructions | Claim Dispositive |
|---|---|---|---|
| '449 patent: claims 2, 6, 10 | their plain and ordinary meanings.<br><br>NST disagrees that this term is governed by Section 112, ¶ 6. Nonetheless, if the Court holds that this term is so governed, NST proposes the following construction:<br><br>**Function**: "forward a request for a connection to a resource manager"<br><br>**Structure**: "circuit" | **Structure**: portion of the circuit configured to implement the scheme disclosed in the '449 Patent at 10:19–24, 10:41–54.<br><br>Otherwise, indefinite. | |

**C. '052 Patent**

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff's Proposed Constructions | Defendants' Proposed Constructions | Claim Dispositive |
|---|---|---|---|
| "interconnect means"<br><br>'052 patent: claims 1, 6–7 | "multi-hop interconnection between modules separated by one or more network nodes" | Plain and ordinary meaning. | No |
| "mapping means (A) for mapping the requested at least | "mapping means" means "circuit configured to map a | Subject to Section 112, ¶ 6 | Yes, if held indefinite. |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff's Proposed Constructions | Defendants' Proposed Constructions | Claim Dispositive |
|---|---|---|---|
| one communication service based on said specific communication properties to a connection based on a set of connection properties according to said at least one communication service identification."<br><br>'052 patent: claims 1, 2, 7 | requested communication service to a connection," NST incorporates the agreed upon definition for the term "connection properties," and the remaining language should be afforded their plain and ordinary meanings.<br><br>NST disagrees that this term is governed by Section 112 ¶ 6. Nevertheless, if the Court holds that this term is so governed, NST proposes the following construction:<br><br>**Function**: "mapping the requested at least one communication service based on said specific communication properties to a connection based on a set of connection properties according to said at least one communication service identification"<br><br>**Structure**: "circuit" | **Function**: "mapping the requested at least one communication service based on said specific communication properties to a connection based on a set of connection properties according to said at least one communication service identification."<br><br>**Structure**: adapter unit/shell comprising a sequentializing unit and a desequentializing unit as disclosed in the '052 Patent at 5:58–6:3, 6:30–7:14, Figs. 1, 2A and 2B.<br><br>Otherwise, indefinite. | |

**D. ’9893 Patent**

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff’s Proposed Constructions | Defendants’ Proposed Constructions | Claim Dispositive |
|---|---|---|---|
| “arranging … the first and second information comprising said issued message as a single address”<br><br>’9893 patent: claim 4 | “arranging … the first and second information comprised in said issued message as a single address” | Indefinite. | Yes, if held indefinite. |

**E. ’2893 Patent**

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff’s Proposed Constructions | Defendants’ Proposed Constructions | Claim Dispositive |
|---|---|---|---|
| “each data package comprising N data elements”<br><br>’2893 patent: claim 1, 10 | “data package” means “fixed-size arrangement of data,” “data elements” means “groups of data,” and the remaining language should be afforded their plain and ordinary meanings. | “every data package communicated by the network stations has a fixed size of N data elements” | No. |

### F. ’800 Patent

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff’s Proposed Constructions | Defendants’ Proposed Constructions | Claim Dispositive |
|---|---|---|---|
| “optimal amount of data to be buffered”<br><br>’800 patent: claim 12 | Plain and ordinary meaning | Indefinite | Yes, if held indefinite. |
| “optimal moment for sending the data”<br><br>’800 patent: claim 12 | Plain and ordinary meaning | Indefinite | Yes, if held indefinite. |
| “determination unit”<br><br>’800 patent: claim 12 | “circuit that makes determinations based on stored or received information”<br><br>NST disagrees that this term is governed by Section 112 ¶ 6. Nevertheless, if the Court holds that this term is so governed, NST proposes the following construction:<br><br>**Function**: “determine an optimal amount of data to be buffered” and “determine an optimal moment for sending the data” | Subject to Section 112, ¶ 6.<br><br>**Function**: “determine a first/second amount of data to be buffered by the first/second memory” and for at least one of the first determination unit and the second determination unit “determine an optimal moment for sending data.”<br><br>**Structure**: Indefinite. | Yes, if held indefinite. |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff's Proposed Constructions | Defendants' Proposed Constructions | Claim Dispositive |
|---|---|---|---|
| | **Structure**: "circuit" | | |
| "said first wrapper" / "said second wrapper"<br><br>'800 patent: claim 12 | "said first memory" / "said second memory" | Indefinite. | Yes, if held indefinite. |

# APPENDIX 3

## Plaintiff's Proposed Constructions for Disputed Terms[1]

### A. '818 Patent

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff's Proposed Constructions | Evidence |
|---|---|---|
| "interface means" /<br><br>"interface means (ANIP, PNIP) for managing the interface between a module (M, S) and the network (N, RN) wherein said interface means (ANIP, PNIP) comprises a first dropping means (DM) for dropping data, and wherein the dropping of data and therefore the transaction completion can be controlled by the interfaces means"<br><br>'818 patent: claims 1, 6, 7 | "interface circuit that connects a module to a network" /<br><br>NST incorporates its definitions for the terms "interface means," "network," and "dropping means." The remaining parts of this term should be afforded their plain and ordinary meanings.<br><br>NST disagrees that this term is governed by Section 112, ¶ 6. Nevertheless, if the Court holds that this term is so governed, NST proposes the following construction:<br><br>**Function**: With respect to claim 1, "manage the interface between a module and the network, and control the dropping | *See, e.g.*,<br><br>'818, Abstract; 5:37-40; 5:37-44; 5:40-41; 5:42-44; 5:64-66; 5:64-67; 7:23-27; 7:27-31; Figures<br><br>"IEEE Standard Dictionary of Electrical and Electronics Terms," 5th ed., (1993)<br><br>"The Authoritative Dictionary of IEEE Standards Terms," 7th ed. (2000)<br><br>"The Computer Glossary," 8th ed. (1999) |

[1] To the extent not expressly cited above, additional citations to supporting evidence may be found in the Declaration of Dr. Erik Chmelar. Plaintiff reserves the right to rely on evidence Defendants cite, rely on, or otherwise present, and to present evidence rebutting or otherwise providing context to the same.

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff's Proposed Constructions | Evidence |
|---|---|---|
| | of data and therefore the transaction completion"<br><br>With respect to claim 6, the function according to claim 1 and "store received error messages"<br><br>With respect to claim 7, the function according to claim 1 and "not drop error messages"<br><br>**Structure**: "circuit" | |
| "dropping means (DM) for dropping data exchanged by said first and second module (M, S)"<br><br>'818 patent: claims 1, 3, 5 | "dropping means" means "circuit configured to drop data," the remaining language should be afforded their plain and ordinary meanings.<br><br>NST disagrees that this term is governed by Section 112 ¶ 6. Nevertheless, if the Court holds that this term is so governed, NST proposes the following construction:<br><br>**Function**: With respect to claim 1, "drop data exchanged by said first and second module" | *See, e.g.*,<br><br>'818, Abstract; 5:27-28; 5:37-41; 5:37-42; 5:50-54; 5:60-63; 7:23-48; 7:48-50; Figures<br><br>"IEEE Standard Dictionary of Electrical and Electronics Terms," 5th ed., (1993)<br><br>"The Authoritative Dictionary of IEEE Standards Terms," 7th ed. (2000)<br><br>"Computer Glossary," 8th ed. (1999) |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff's Proposed Constructions | Evidence |
|---|---|---|
| | With respect to claim 3, the function according to claim 1 and "create an error message if data is dropped"<br><br>With respect to claim 5, the function according to claim 3 and "send said error message to said first module"<br><br>**Structure**: "circuit" | |

**B. '449 Patent**

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff's Proposed Constructions | Evidence |
|---|---|---|
| "communication manager [(CM) for managing the communication between different modules"<br><br>'449 patent: claims 2, 6, 10 | "communication manager" means "circuit that manages communication between modules" and the remaining language should be afforded their plain and ordinary meanings.<br><br>NST disagrees that this term is governed by Section 112, ¶ 6. Nonetheless, if the Court holds that this term is so governed, NST proposes the following construction:<br><br>**Function**: "forward a request for a connection to a resource manager" | *See, e.g.*,<br><br>'449, Abstract; 1:7-11; 7:15-18; 7:35-38; 8:7-11; 9:17-21; 9:66-10:3; 9:66-10:6; 10:19-46; Figures<br><br>"IEEE Standard Dictionary of Electrical and Electronics Terms," 5th ed., (1993)<br><br>"The Authoritative Dictionary of IEEE Standards Terms," 7th ed. (2000) |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff's Proposed Constructions | Evidence |
|---|---|---|
| | **Structure**: "circuit" | |

**C. '052 Patent**

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff's Proposed Constructions | Evidence |
|---|---|---|
| "interconnect means"<br><br>'052 patent: claims 1, 6–7 | "multi-hop interconnection between modules separated by one or more network nodes" | *See, e.g.*,<br><br>'052, Abstract; 1:56-62; 1:7-8; 2:33-36; 3:15-18; 3:18-22; 3:51-54; 4:1-4; 4:30-3; 4:37-39; 4:50-5:5; 5:24-31; 5:27-28; 5:6-7; 6:13-19; 8:7-8; 8:7-9; 8:9-12; Figures<br><br>'818, 1:59-65; 3:47-51<br>'449, 1:58-64; 3:58-62<br>'9893, 1:57-63<br>'800, 56-62<br><br>Dally, W. and Towles, B., Route Packets, Not Wires: On-chip Interconnection Networks, Proc. 38th Design Automation Conference (2001)<br><br>"IEEE Standard Dictionary of Electrical and Electronics Terms," 5th ed., (1993) |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff's Proposed Constructions | Evidence |
|---|---|---|
| | | "The Authoritative Dictionary of IEEE Standards Terms," 7th ed. (2000) |
| "mapping means (A) for mapping the requested at least one communication service based on said specific communication properties to a connection based on a set of connection properties according to said at least one communication service identification."<br><br>'052 patent: claims 1, 2, 7 | "mapping means" means "circuit configured to map a requested communication service to a connection," NST incorporates the agreed upon definition for the term "connection properties," and the remaining language should be afforded their plain and ordinary meanings.<br><br>NST disagrees that this term is governed by Section 112 ¶ 6. Nevertheless, if the Court holds that this term is so governed, NST proposes the following construction:<br><br>**Function**: "mapping the requested at least one communication service based on said specific communication properties to a connection based on a set of connection properties according to said at least one communication service identification"<br><br>**Structure**: "circuit" | *See, e.g.,*<br><br>'052 Patent, Abstract; 3:6-9; 3:22-34; 3:45-61; 4:1-21; 5:53-6:3; 6:30-7:14; 8:7-25; 8:26-46; 8:47-9:5; Figures |

### D. ’9893 Patent

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff’s Proposed Constructions | Evidence |
|---|---|---|
| “arranging … the first and second information comprising said issued message as a single address”<br><br>’9893 patent: claim 4 | “arranging … the first and second information comprised in said issued message as a single address” | *See, e.g.*,<br><br>’9893 Patent, Abstract; 3:16-22; 3:46-49; 4:19-23; 12:39-54 |

### E. ’2893 Patent

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff’s Proposed Constructions | Evidence |
|---|---|---|
| “each data package comprising N data elements”<br><br>’2893 patent: claim 1, 10 | “data package” means “fixed-size arrangement of data,” “data elements” means “groups of data,” and the remaining language should be afforded their plain and ordinary meanings. | *See, e.g.*,<br><br>’2893 Patent, Abstract; 1:65-2:6; 2:15-22; 2:22-28; 4:53-56; 6:40-43; 7:58-61; 10:16-18; Figures |

### F. ’800 Patent

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff’s Proposed Constructions | Evidence |
|---|---|---|
| “optimal moment for sending the data”<br><br>’800 patent: claim 12 | Plain and ordinary meaning | *See, e.g.*,<br><br>’800, 3:14; 5:31-32; 7:4-14; 7:4-6; 11:48-50; 12:16-32; Figures |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Plaintiff's Proposed Constructions | Evidence |
|---|---|---|
| "optimal amount of data to be buffered"<br><br>'800 patent: claim 12 | Plain and ordinary meaning | *See, e.g.*,<br><br>'800, 3:35-37; 4:18-28; 4:49-57; 6:15-17; 6:22-30; 6:31-36; 7:23-28; 7:44-51; Figures |
| "determination unit"<br><br>'800 patent: claim 12 | "circuit that makes determinations based on stored or received information"<br><br>NST disagrees that this term is governed by Section 112 ¶ 6. Nevertheless, if the Court holds that this term is so governed, NST proposes the following construction:<br><br>**Function**: "determine an optimal amount of data to be buffered" and "determine an optimal moment for sending the data"<br><br>**Structure**: "circuit" | *See, e.g.*,<br><br>'800 patent, 4:18-24; 6:47-64; 7:4-6; 8:34-36; 11:44-12:19<br><br>"IEEE Standard Dictionary of Electrical and Electronics Terms," 5th ed., (1993)<br><br>"American Heritage Dictionary" 4th ed., (2000) |
| "said first wrapper" / "said second wrapper"<br><br>'800 patent: claim 12 | "said first memory" / "said second memory" | *See, e.g.*,<br><br>'800 patent, 3:41-43; 3:54-56; 4:1-2; 4:7-8; 4:18-22; 4:41-43; 5:60-64; 6:4-14; 6:31-38; 11:62-12:19 |

# APPENDIX 4

## Defendants' Proposed Constructions for Disputed Terms

### A. '818 Patent

| Term or Phrase & Asserted Patent(s) and Claim(s) | Defendants' Proposed Constructions | Evidence |
|---|---|---|
| "interface means" /<br><br>"interface means (ANIP, PNIP) for managing the interface between a module (M, S) and the network (N, RN) wherein said interface means (ANIP, PNIP) comprises a first dropping means (DM) for dropping data, and wherein the dropping of data and therefore the transaction completion can be controlled by the interfaces means"<br><br>'818 patent: claims 1, 6, 7 | Subject to Section 112, ¶ 6<br><br>**Function**:<br>- Claim 1, "managing the interface between a module (M, S) and a network (N, RN) and controlling dropping of data and transaction completion."<br>- Claim 6, "store received error messages"<br>- Claim 7, "not drop error messages"<br><br>**Structure**: portion of the circuit configured to implement the scheme disclosed in the '818 Patent at 7:57-8:63 and 9:10-49 and the structure of the claimed dropping means.<br><br>Otherwise, indefinite. | '818 patent at Abstract, 5:37–44, 5:64–6:3, 7:57–8:63, 9:1–2, 9:10–49<br><br>Declaration of Dr. Vijay Madisetti (and any evidence cited therein)<br><br>Evidence cited by NST<br><br>*Interface*, New Oxford American Dictionary 884 (2001)<br><br>*Interface*, Microsoft Computer Dictionary 279 (5th ed. 2002).<br><br>*Network Interface*, The Authoritative Dictionary of IEEE Standards Terms 726 (7th ed. 2000).<br><br>*Network Interface*, Cisco Systems' Dictionary of Internetworking Terms and Acronyms 244 (2001).<br><br>*Interface*, American Heritage Dictionary of the English Language 912 (4th ed. 2000).<br><br>Declaration of Dr. Mitchell Thornton, *Network System Technologies, LLC v. Texas Instruments Inc., et al.*, CA No. |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Defendants' Proposed Constructions | Evidence |
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| | | 2:22-cv-482, Dkt. No. 107-1 (E.D. Tex. Oct. 11, 2023) (and any evidence cited therein)<br><br>Declaration of Dr. Marwan Hassoun, *Network System Technologies, LLC v. Qualcomm Inc., et al.*, CA No. 1:22-cv-1331, Dkt. No. 77-1 (W.D. Tex. Oct. 12, 2023) (and any evidence cited therein) |
| "dropping means (DM) for dropping data exchanged by said first and second module (M, S)"<br><br>'818 patent: claims 1, 3, 5 | Subject to Section 112, ¶ 6.<br><br>**Function**:<br>- Claim 1, **"**dropping data exchanged by first and second module (M, S)"<br>- Claim 3, "create an error message if data is dropped"<br>- Claim 5, "send said error message to said first module"<br><br>**Structure**: portion of the circuit configured to implement the scheme disclosed in the '818 Patent at 7:45-56, 8:38-40, and 8:64-9:10.<br><br>Otherwise, indefinite. | '818 patent at Abstract, 5:27–30, 5:35–36, 5:50–52, 5:56–58, 6:49–52, 7:16–19, 7:45–56, 8:38–40, 8:64–9:10, 9:10–49, Fig. 2<br><br>'818 patent File History at 06/29/2006 Office Action<br><br>'818 patent File History at 09/29/2006 Applicant Response<br><br>'818 patent File History at 01/12/2007 Office Action<br><br>'818 patent File History at 04/11/2007 Applicant Response<br><br>Declaration of Dr. Vijay Madisetti (and any evidence cited therein)<br><br>Evidence cited by NST<br><br>*drop, drop and insert*, Hargrave's Communications Dictionary (2001)<br><br>Declaration of Dr. Mitchell Thornton, *Network System Technologies, LLC v.* |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Defendants' Proposed Constructions | Evidence |
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| | | *Texas Instruments Inc., et al.*, CA No. 2:22-cv-482, Dkt. No. 107-1 (E.D. Tex. Oct. 11, 2023) (and any evidence cited therein)<br><br>Declaration of Dr. Marwan Hassoun, *Network System Technologies, LLC v. Qualcomm Inc., et al.*, CA No. 1:22-cv-1331, Dkt. No. 77-1 (W.D. Tex. Oct. 12, 2023) (and any evidence cited therein) |

**B. '449 Patent**

| Term or Phrase & Asserted Patent(s) and Claim(s) | Defendants' Proposed Constructions | Evidence |
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| "communication manager [(CM) for managing the communication between different modules"<br><br>'449 patent: claims 2, 6, 10 | Subject to Section 112, ¶ 6.<br><br>**Function**: "forwarding a request to a resource manager."<br><br>**Structure**: portion of the circuit configured to implement the scheme disclosed in the '449 Patent at 10:19-24, 10:41-54.<br><br>Otherwise, indefinite. | '449 patent at 7:35–8:6, 9:66–10:6, 10:19–24, 10:41–54, 10:56–61, Fig. 3<br><br>'449 patent File History at 03/02/2007 Office Action<br><br>'449 patent File History at 08/23/2007 Office Action<br><br>'449 patent File History at 11/20/2007 Applicant Response<br><br>Declaration of Dr. Vijay Madisetti (and any evidence cited therein)<br><br>Evidence cited by NST<br><br>Declaration of Dr. Marwan Hassoun, |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Defendants' Proposed Constructions | Evidence |
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| | | *Network System Technologies, LLC v. Qualcomm Inc., et al.*, CA No. 1:22-cv-1331, Dkt. No. 77-1 (W.D. Tex. Oct. 12, 2023) (and any evidence cited therein)<br><br>Reply Declaration of Dr. Marwan Hassoun, *Network System Technologies, LLC v. Qualcomm Inc., et al.*, CA No. 1:22-cv-1331, Dkt. No. 83-1 (W.D. Tex. Nov. 30, 2023) (and any evidence cited therein) |

**C. '052 Patent**

| Term or Phrase & Asserted Patent(s) and Claim(s) | Defendants' Proposed Constructions | Evidence |
|---|---|---|
| "interconnect means"<br><br>'052 patent: claims 1, 6–7 | Plain and ordinary meaning. | '052 patent at Abstract, 1:6–10, 1:33–2:62, 3:10–4:12, 4:43–50, 5:53–6:12, 8:47–58<br><br>Declaration of Dr. Vijay Madisetti (and any evidence cited therein)<br><br>Evidence cited by NST<br><br>*Interconnect*, Newton's Telecom Dictionary 380 (18th ed. 2002).<br><br>*Interconnect*, Microsoft Computer Dictionary 279 (5th ed. 2002).<br><br>*Interconnect*, New Oxford American Dictionary 884 (2001). |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Defendants' Proposed Constructions | Evidence |
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| | | *Interconnect*, The Authoritative Dictionary of IEEE Standards Terms 573 (7th ed. 2000).<br><br>*Interconnect*, American Heritage Dictionary of the English Language 912 (4th ed. 2000).<br><br>Declaration of Dr. Mitchell Thornton, *Network System Technologies, LLC v. Texas Instruments Inc., et al.*, CA No. 2:22-cv-482, Dkt. No. 107-1 (E.D. Tex. Oct. 11, 2023) (and any evidence cited therein)<br><br>Declaration of Dr. Marwan Hassoun, *Network System Technologies, LLC v. Qualcomm Inc., et al.*, CA No. 1:22-cv-1331, Dkt. No. 77-1 (W.D. Tex. Oct. 12, 2023) (and any evidence cited therein) |
| "mapping means (A) for mapping the requested at least one communication service based on said specific communication properties to a connection based on a set of connection properties according to said at least one communication service identification."<br><br>'052 patent: claims 1, 2, 7 | Subject to Section 112, ¶ 6.<br><br>**Function**: "mapping the requested at least one communication service based on said specific communication properties to a connection based on a set of connection properties according to said at least one communication service identification."<br><br>**Structure**: adapter unit/shell comprising a sequentializing unit and a | '052 patent at Abstract, 3:22–27, 3:30–34, 4:7–12, 5:6–12, 5:58–6:3, 6:30–7:14, 7:40–48, 8:26–36, Figs. 1, 2A and 2B<br><br>'052 patent File History at 09/25/2008 Office Action<br><br>'052 patent File History at 01/06/2009 Applicant Response<br><br>'052 patent File History at 39/09/2009 Office Action |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Defendants' Proposed Constructions | Evidence |
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| | desequentializing unit as disclosed in the '052 patent at 5:58–6:3, 6:30–7:14, Figs. 1, 2A and 2B.<br><br>Otherwise, indefinite. | '052 patent File History at 05/14/2009 Applicant Response<br><br>Declaration of Dr. Vijay Madisetti (and any evidence cited therein)<br><br>Evidence cited by NST |

**D. '9893 Patent**

| Term or Phrase & Asserted Patent(s) and Claim(s) | Defendants' Proposed Constructions | Evidence |
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| "arranging … the first and second information comprising said issued message as a single address"<br><br>'9893 patent: claim 4 | Indefinite. | '9893 patent at Abstract, 1:6–10, 1:45–53, 4:1–5, 4:23–28, 7:2–4<br><br>'9893 patent File History at 03/19/2010 Examiner's Amendment<br><br>Declaration of Dr. Vijay Madisetti (and any evidence cited therein)<br><br>Evidence cited by NST<br><br>Declaration of Dr. Marwan Hassoun, *Network System Technologies, LLC v. Qualcomm Inc., et al.*, CA No. 1:22-cv-1331, Dkt. No. 77-1 (W.D. Tex. Oct. 12, 2023) (and any evidence cited therein)<br><br>Reply Declaration of Dr. Marwan Hassoun, *Network System Technologies, LLC v. Qualcomm Inc., et al.*, CA No. 1:22-cv-1331, Dkt. No. 83-1 (W.D. Tex. |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Defendants' Proposed Constructions | Evidence |
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| | | Nov. 30, 2023) (and any evidence cited therein) |

**E. '2893 Patent**

| Term or Phrase & Asserted Patent(s) and Claim(s) | Defendants' Proposed Constructions | Evidence |
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| "each data package comprising N data elements"<br><br>'2893 patent: claim 1, 10 | "every data package communicated by the network stations has a fixed size of N data elements" | '2893 patent at 1:34–46, 1:54–61, 1:65–2:33, 5:54–62, Figs. 2, 4<br><br>Declaration of Dr. Vijay Madisetti (and any evidence cited therein)<br><br>Evidence cited by NST<br><br>Rijpkema et al., "Trade-offs in the design of a router with both guaranteed and best-effort services for networks on chip," IEEE Proceedings-Computers and Digital Techniques, 150(5), 294-302.<br><br>Carloni et al., "Coping with latency in SoC design", IEEE Micro 5, Vol. 22, p. 24-35, IEEE 2002<br><br>Radulescu et al., "An efficient On-Chip Network Interface Offering Guaranteed Services, Shared Memory Abstraction and Flexible Network Configuration" Proceedings of Design, Automation and Test Conference in Europe, February 2004<br><br>*Each*, Black's Law Dictionary Fifth Edition |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Defendants' Proposed Constructions | Evidence |
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| | | (1979) at 455<br><br>*Each*, The American Heritage College Dictionary, Third Edition (2000) at 430<br><br>Declaration of Dr. Marwan Hassoun, *Network System Technologies, LLC v. Qualcomm Inc., et al.*, CA No. 1:22-cv-1331, Dkt. No. 77-1 (W.D. Tex. Oct. 12, 2023) (and any evidence cited therein)<br><br>Reply Declaration of Dr. Marwan Hassoun, *Network System Technologies, LLC v. Qualcomm Inc., et al.*, CA No. 1:22-cv-1331, Dkt. No. 83-1 (W.D. Tex. Nov. 30, 2023) (and any evidence cited therein) |

**F. '800 Patent**

| Term or Phrase & Asserted Patent(s) and Claim(s) | Defendants' Proposed Constructions | Evidence |
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| "optimal amount of data to be buffered"<br><br>'800 patent: claim 12 | Indefinite | '800 patent at 3:47–49, 3:60–63, 4:50–54, 4:55–58, 5:27–35, 6:49–7:2, 7:16–19, 7:31-33, Fig. 2<br><br>Declaration of Dr. Vijay Madisetti (and any evidence cited therein)<br><br>Evidence cited by NST |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Defendants' Proposed Constructions | Evidence |
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| | | *Optimal*, *optimum*, New Oxford American Dictionary 1202 (2001).<br><br>*Optimal*, *optimum*, The American Heritage College Dictionary 958 (3rd ed. 2000)<br><br>*Optimal*, *optimum*, American Heritage Dictionary of the English Language 1235 (4th ed. 2000).<br><br>*Optimal*, *Optimal Decision*, Dictionary of Computer Science Engineering and Technology (2001)<br><br>Declaration of Dr. Marwan Hassoun, *Network System Technologies, LLC v. Qualcomm Inc., et al.*, CA No. 1:22-cv-1331, Dkt. No. 77-1 (W.D. Tex. Oct. 12, 2023) (and any evidence cited therein)<br><br>Reply Declaration of Dr. Marwan Hassoun, *Network System Technologies, LLC v. Qualcomm Inc., et al.*, CA No. 1:22-cv-1331, Dkt. No. 83-1 (W.D. Tex. Nov. 30, 2023) (and any evidence cited therein)<br><br>Declaration of Dr. Mitchell Thornton, *Network System Technologies, LLC v. Texas Instruments Inc., et al.*, CA No. 2:22-cv-482, Dkt. No. 107-1 (E.D. Tex. Oct. 11, 2023) (and any evidence cited |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Defendants' Proposed Constructions | Evidence |
|---|---|---|
| | | therein) |
| "optimal moment for sending the data"<br><br>'800 patent: claim 12 | Indefinite | '800 patent at 5:27–35 7:4–6, Fig. 2<br><br>Declaration of Dr. Vijay Madisetti (and any evidence cited therein)<br><br>Evidence cited by NST<br><br>*Optimal*, *optimum*, New Oxford American Dictionary 1202 (2001).<br><br>*Optimal*, *optimum*, The American Heritage College Dictionary 958 (3rd ed. 2000)<br><br>*Optimal*, *optimum*, American Heritage Dictionary of the English Language 1235 (4th ed. 2000).<br><br>*Optimal*, *Optimal Decision*, Dictionary of Computer Science Engineering and Technology (2001)<br><br>Declaration of Dr. Marwan Hassoun, *Network System Technologies, LLC v. Qualcomm Inc., et al.*, CA No. 1:22-cv-1331, Dkt. No. 77-1 (W.D. Tex. Oct. 12, 2023) (and any evidence cited therein)<br><br>Reply Declaration of Dr. Marwan Hassoun, *Network System Technologies, LLC v. Qualcomm Inc., et al.*, CA No. 1:22-cv-1331, Dkt. No. 83-1 (W.D. Tex. Nov. 30, 2023) (and any evidence cited |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Defendants' Proposed Constructions | Evidence |
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| | | therein)<br><br>Declaration of Dr. Mitchell Thornton, *Network System Technologies, LLC v. Texas Instruments Inc., et al.*, CA No. 2:22-cv-482, Dkt. No. 107-1 (E.D. Tex. Oct. 11, 2023) (and any evidence cited therein) |
| "determination unit"<br><br>'800 patent: claim 12 | Subject to Section 112, ¶ 6.<br><br>**Function**: "determine a first/second amount of data to be buffered by the first/second memory" and for at least one of the first determination unit and the second determination unit "determine an optimal moment for sending data."<br><br>**Structure**: Indefinite. | '800 patent at 6:47–7:13, Fig. 2<br><br>Declaration of Dr. Vijay Madisetti (and any evidence cited therein)<br><br>Evidence cited by NST<br><br>*Unit*, The Authoritative Dictionary of IEEE Standards Terms 1234–1235 (7th ed. 2000)<br><br>Declaration of Dr. Marwan Hassoun, *Network System Technologies, LLC v. Qualcomm Inc., et al.*, CA No. 1:22-cv-1331, Dkt. No. 77-1 (W.D. Tex. Oct. 12, 2023) (and any evidence cited therein) |
| "said first wrapper" / "said second wrapper"<br><br>'800 patent: claim 12 | Indefinite. | '800 patent at 3:41–46, 3:54–60, 3:64–4:2, 4:18–24, 4:41–46, 5:58–64, 6:14–16, 6:22–25, 8:13–20, Fig. 2<br><br>Declaration of Dr. Vijay Madisetti (and any evidence cited therein)<br><br>Evidence cited by NST |

| Term or Phrase & Asserted Patent(s) and Claim(s) | Defendants' Proposed Constructions | Evidence |
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| | | Declaration of Dr. Marwan Hassoun, *Network System Technologies, LLC v. Qualcomm Inc., et al.*, CA No. 1:22-cv-1331, Dkt. No. 77-1 (W.D. Tex. Oct. 12, 2023) (and any evidence cited therein) |