Filed: April 4, 2018

#### UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

### THE THE TABLE TO THE TENE BOTTON

INTEL CORP. and CAVIUM, INC., Petitioner,

V.

ALACRITECH, INC., Patent Owner.

Case IPR2017-01406 U.S. Patent No. 7,673,072<sup>1</sup> Title: FAST-PATH APPARATUS FOR TRANSMITTING DATA CORRESPONDING A TCP CONNECTION

# PETITIONER'S RESPONSE IN OPPOSITION TO PATENT OWNER'S CONTINGENT MOTION TO AMEND UNDER 37 C.F.R. § 42.121

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<sup>&</sup>lt;sup>1</sup> Cavium, Inc., which filed a Petition in Case IPR2017-01707, has been joined as a petitioner in this proceeding.

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|      | A.   |            | t Owner Does Not Show Adequate Written Description ort  |  |
|      | B.   |            | t Owner Has Improperly Expanded The Scope Of The  |  |
|      |      | 1.         | Substitute Claim 22 Broadens The Scope Of Claim 15  |  |
|      |      | 2.         | Substitute Claims 23-29 Broaden The Scope Of Claims 2-8   |  |
| III. | SUB  | STITU      | TE CLAIMS 22-29 AND 36-42 ARE INDEFINITE8   |  |
|      | A.   | Subst      | citute Claims 22-29 Are Indefinite8   |  |
|      | B.   | Subst      | citute Claims 36-42 Are Indefinite10  |  |
| IV.  |      |            | TE CLAIMS 22-42 ARE OBVIOUS OVER ERICKSON OF TANENBAUM9610  |  |
|      | A.   |            | citute Claim 22 Is Obvious Over Erickson in view of nbaum96   |  |
|      |      | 1.         | [22.P] A method comprising:11   |  |
|      |      | 2.         | [22.1] establishing, at a host computer, a transport layer connection, including creating a context that includes a media access control (MAC) layer address, an Internet Protocol (IP) address and Transmission Control Protocol (TCP) state information for the connection; |  |
|      |      | 3.         | [22.2] transferring the context information to an interface device;   |  |



|    | 4. | [22.3] transferring data from the network host to the interface device, after transferring the context information to the interface device;  | 14         |
|----|----|--|------------|
|    | 5. | [22.4] dividing, by the interface device, the data into segments:  | 15         |
|    | 6. | [22.5] creating headers for the segments, by the interface device, from a template header containing protocol header information including IP address and TCP state information; and   | 15         |
|    | 7. | [22.6] prepending the headers to the segments to form transmit packets   | 16         |
| В. |    | citute Claims 23-29 Are Obvious Over Erickson in View of nbaum96   | 16         |
|    | 1. | [23] The method of claim 22, further comprising transferring status information for the context to the interface device during the same operation as transferring protocol header information to the interface device  | 1 <i>6</i> |
|    | 2. | [24] The method of claim 22, wherein creating headers for the segments includes adding status information to the template header.  | 16         |
|    | 3. | [25] The method of claim 22, wherein the protocol header information includes Internet Protocol (IP) addresses and Transmission Control Protocol (TCP) ports for the connection, and creating headers for the segments includes forming headers containing the IP addresses and TCP ports. | 16         |
|    | 4. | [26] The method of claim 22, wherein the protocol header information includes a Media Access Control (MAC) layer address, and creating headers for the segments includes forming headers containing the MAC layer address  | 15         |



|    | 5. | [27] The method of claim 22, further comprising adding to the context a descriptor for a buffer, in a memory of the computer, that has been allocated for application data   | 17 |
|----|----|--|----|
|    | 6. | [28] The method of claim 22, further comprising receiving, by the interface device, receive packets that correspond to the context, and updating the context by the interface device to account for the receive packets  | 17 |
|    | 7. | [29] The method of claim 22, further comprising transmitting the transmit packets on a network   | 17 |
| C. |    | titute Claim 30 Is Obvious Over Erickson in view of nbaum96  | 18 |
|    | 1. | [30.P] A method comprising:  | 18 |
|    | 2. | [30.1] creating, at a computer, a context including protocol information and status information for a network connection, the protocol information providing a template header for the network connection and including a media access control (MAC) layer address, an Internet Protocol (IP) address and Transmission Control Protocol (TCP) state information; | 18 |
|    | 3. | [30.2] transferring the protocol information and status information to an interface device;  | 19 |
|    | 4. | [30.3] transferring data from the computer to the interface device, after transferring the protocol information and status information to the interface device;  | 19 |
|    | 5. | [30.4] dividing, by the interface device, the data into segments;  | 19 |
|    | 6. | [30.5] creating headers for the segments, by the interface device, from the template header;   | 20 |
|    | 7. | [30.6] prepending the headers to the segments to form packets; and   | 20 |



|    | 8.  | [30.7] transmitting the packets on a network   | 20 |  |
|----|---|--|----|--|
| D. |   | Substitute Claims 31-35 Are Obvious Over Erickson in View of Tanenbaum96   |    |  |
|    | 1.  | [31] The method of claim 30, wherein creating headers for the segments includes adding current status information to the template header, the current status information being different than the status information that was transferred to the interface device.                         | 20 |  |
|    | 2.  | [32] The method of claim 30, wherein the protocol header information includes Internet Protocol (IP) addresses and Transmission Control Protocol (TCP) ports for the connection, and creating headers for the segments includes forming headers containing the IP addresses and TCP ports. | 21 |  |
|    | 3.  | [33] The method of claim 30, wherein the protocol header information includes a Media Access Control (MAC) layer address, and creating headers for the segments includes forming headers containing the MAC layer address.   | 21 |  |
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|    | 1   | [36 P] A method comprising:  | 22 |  |



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