05-14-2002 FORM PTO-1595 U.S. DEPARTMENT OF COMMERCE ΞT 1-31-92 REC( Patent and Trademark Office Docket No. 272/206, 272/207, 272/208, 272/209, 272/210, 272/211, 272/212, 272/213, 272/214, To the Honorable Commissioner of Patents and Trauerrians. 1,02089463 .nal documents or copy thereof. Name of conveying party(ies): 2. Name and address of receiving party: Cadence Design Systems, Inc. 5-7-02 Name: Quickturn Design Systems, Inc. Additional name(s) of conveying party(ies) attached? Internal Address: ☐ Yes ☒ No 3. Nature of conveyance: City: \_\_ \_ State: \_\_\_ Zip: ☐ Merger ☐ Security Agreement ☐ Change of Name Street Address: 2655 Seely Avenue Building 11 State CA 95134 Other City: San Jose Execution Date: April 22, 2002 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: A. Patent Application No(s).: 09/655,596: 09/656,541, B. Patent No(s).: 09/193,733, 09/523,053, 09/656,146, 09/373,125, 09/655,595, 09/656,147, 09/796,055 and 09/522,354 Additional numbers attached? ☐ Yes ☒ No 6. Total number of applications and patents involved: 10 Name and address of party to whom correspondence concerning document should be mailed: Name: Jeffrey A. Miller Total fee (37 CFR 3.41): \$ 400.00 □ Enclosed Internal Address: LYON & LYON LLP 633 West Fifth Street, Suite 4700 Charge this Deposit Account if any additional fee is Los Angeles, CA 90071-2066 required Deposit Account Number: 12-2475 DO NOT USE THIS SPACE Statement and signature: To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy\_of the original dogument. Date: April 25, 2002 Total number of pages including cover sheet: 4 OMB No. 0651-0011 (exp. 4/94) Do not detach this portion Mail documents to be recorded with required cover sheet information to: Director — U.S. Patent and Trademark Office 05/14/2002 LMUELLER 00000017 09655596 **Box Assignments** 

01 FC:581

400.00 IDP

Washington, D.C. 20231

Public burden reporting for this sample cover sheet is estimated to average about 30 minutes per document to be recorded, including time for reviewing the document and gathering the data needed, and completing and reviewing the sample cover sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Office of Information Systems, PK2-1000C, Washington, D.C. 20231, and to the Office of Management and Budget, Paperwork Reduction Project, (0651-0011), Washington, D.C. 20503

## ASSIGNMENT OF PATENT APPLICATIONS

Whereas, CADENCE DESIGN SYSTEMS, INC., a corporation organized and existing under and by virtue of the laws of the Delaware and having its place of business at 2655 Seely Avenue, San Jose, California 94134 ("CADENCE"), owns of all right, title and interest in the inventions claimed and/or disclosed in following United States Patent Applications ("the Patent Applications"):

Patent Application Number	Date Patent Application Filed	Inventors	Title
09/655,596	09-06-00	Beausoleil, W.F., et al	High Speed Software Driven Emulator Comprised of a Plurality of Emulation Processors with a Method to Allow Memory Read/Writes Without Interrupting the Emulation
09/656,541	09-06-00	Beausoleil, W.F., et al	High Speed Software Driven Emulator Comprised of a Plurality of Emulation Processors with a Method to High Speed Bulk Read/Write Operation Synchronous DRAM While Refreshing the Memory
09/193,733	11-17-98	Ruedinger, J.	Algorithm to Separate Clock Domains for Emulation Purposes
09/523,053	03-10-00	Ruedinger, J., et al	Methods to Improve Concurrent Behavior Modeling with Emulation
09/656,146	09-06-00	Beausoleil, W.F., et al	High Speed Software Driven Emulator Comprised of a Plurality of Emulation Processors with

PATENT REEL: 012878 FRAME: 0531

			Improved Multiplexed Data Memory
09/373,125	08-12-99	Beausoleil, W.F., et al	Clustered Processors in an Emulation Engine
09/655,595	09/06/00	Beausoleil, W.F., et al	High Speed Software Driven Emulator Comprised of a Plurality of Emulation Processors with an Improved Board-to- Board Interconnection Cable
09/656,147	09/06/00	Beausoleil, W.F., et al	High Speed Software Driven Emulator Comprised of a Plurality of Emulation Processors with an Improved Maintenance Bus that Streams Data
09/796,055	02-28-00	Beausoleil, W.F., et al	High Bandwidth 3D Memory Packaging Technique
09/522,354	03-09-00	Musselman, R., et al	Non-synchronous Hardware Emulator

Whereas QUICKTURN DESIGN SYSTEMS, INC., a corporation organized and existing under and by virtue of the laws of the Delaware and having its place of business at 2655 Seely Avenue, San Jose, California 94134 ("QUICKTURN"), is desirous of acquiring the entire right, title and interest in the inventions claimed and/or disclosed in the Patent Applications;

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, CADENCE hereby sells, assigns, transfers and sets over unto QUICKTURN, its successors and assigns, the full and exclusive right, title and interest to the inventions claimed and/or disclosed in the Patent Applications and to all Letters Patent or application or similar legal protection, not only in the United States and its territorial possessions, but in all countries foreign thereto to be obtained for the inventions claimed and/or disclosed in the Patent Applications, and to any continuation, division, renewal, substitute or reissue thereof or any legal equivalent thereof in the United States or a foreign country for the full term or terms for which the same may be granted, including all priority rights under the International Convention; the Patents to be held and enjoyed by QUICKTURN for its own use and behalf, and for QUICKTURN'S legal

PATENT REEL: 012878 FRAME: 0532 representatives and assigns, to the full end of the term for which any Letters Patents are granted, as fully and entirely as the same would have been held by CADENCE had this assignment and sale not been made. CADENCE hereby authorizes and requests the United States Commissioner of Patents and Trademarks and any officials of foreign countries whose duty it is to issue patents or any legal equivalent thereof to QUICKTURN, its successors and assigns, in accordance with this Assignment.

Executed this 22Nd day of 1 San Jose, CA	4pri/, 2002, at
	Min. cen
	R.L. Smith McKeithen Secretary, CADENCE DESIGN SYSTEMS, INC.
STATE OF CALIFORNIA )	
COUNTY OF SANTA CLARA )	
On 4/22/0 before me, Joyce	M, $B$ $rock$ , personally appeared $R$ known to me - $R$ - $R$ proved to me on the basis
of satisfactory evidence to be the person(s) vinstrument and acknowledged to me that he/	whose name(s) is/are subscribed to the within /she/they executed the same in his/her/their-/their signature(s) on the instrument the person(s), or
WITNESS my hand and official seal	Joyce M. Brock
JOYCE M. BROCK Commission # 1229814 Notary Public — California Santa Clara County My Comm. Expires Aug 20, 2003	Notary Public in and for said County and State

RECORDED: 05/07/2002