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Hongwei Song, Vijayakumar Bhagavatula,	<u> </u>
Jingfeng Liu	Name: Carnegie Mellon University
Additional name(s) of conveying party(ies) attached? Yes N	Internal Address:
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✓ Assignment ☐ Merger	100
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Other	0.100() (dd1000) <u>0000 (01000) (101100</u>
Li Other	
Execution Date: November 1, 2002, November 4,	City: Pittsburgh State: PA Zip: 15213
and November 4, 2002	<u> </u>
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Application number(s) or patent number(s): If this document is being filed together with a new application.	cation, the execution date of the application is: November 7, 2002
A. Patent Application No.(s)	B. Patent No.(s)
10/289780	
10/281/80	
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concerning document should be mailed.	
	7. Total fee (37 CFR
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PATENT REEL: 013472 FRAME: 0977

Attorney's Docket No.	020162	PATENT
		For: U.S. and/or Foreign Rights For: U.S. Application or
		☐ U.S. Provisional Application For: ☐ U.S. Patent
		For: PCT Application
		By: Multiple Inventors
		, ,
A	SSIGNMENT OF	INVENTION (MULTIPLE INVENTORS)
In consideration of th receipt of which is hereby	e payment by AS acknowledged, a	SIGNEE to ASSIGNOR of the sum of One Dollar (\$1.00), the and for other good and valuable consideration,
ASSIGNORS (Inventors)	:	
		5217 Fifth Avenue, Apartment 3
Hongwei Song		People's Rep. Of China
(type or print name of inventors	5)	Address Nationality
		2668 Rossmoor Drive
<u>Vijayakumar Bhagavatula</u>	a	Upper St. Clair, PA 15241 USA
ar. r		60-311 Commons Drive
Jingfeng Liu		Shrewsbury, MA 01545 People's Rep. Of China
······································		

ASSIGNEE:	
Carnegie Mellon University (type or print name of ASSIGNEE)	5000 Forbes Avenue Address
(a non-profit Pennsylvania organization) Nationality	Pittsburgh, PA 15213
and the successors, assigns and legal representatives of	of the ASSIGNEE
(complete one of t	he following)
★ the entire right, title and interest	
and its territorial possessions	%) interest for the United States
(check the following box, if foreign r	rights are also to be assigned)
and in all foreign countries, including all improvements which are disclosed in the invention entitle DENSITY PARITY CHECK CODE WITH A COLUMN W	
(check and complete (a), (b)), (c), (d), (e), (f) or (g))
and which is found in	
(a) U.S. patent application executed on even da	ate herewith
(b) U.S. patent application executed on	
(c) U.S. provisional application naming the above	ve inventor(s) for the above-entitled invention
Express mail label no.:	
Mailed:	
	f this assignment, I, an ASSIGNOR signing below, y to insert below the filing date and application
(d) U.S. application no.:	filed on
(e) International application no. PCT /	
(f) U.S. patent no.	issued
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(also check (g), if foreign application	on(s) is also being assigned)

2

PI - 537100.1

hereby sells, assigns and transfers to

PATENT REEL: 013472 FRAME: 0979 (g) and any legal equivalent thereof in a foreign country, including the right to claim priority and, in and to, all Letters Patent to be obtained for said invention by the above application or any continuation, division, renewal, or substitute thereof, and as to letters patent any reissue or reexamination thereof.

ASSIGNOR hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment;

ASSIGNOR further covenants that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

IN WITNESS WHEREOF, We have hereunto set hand and seal on the date(s) indicated below.

WARNING: The date of signing must be the same as the date of execution of the application, if item (a) was checked above.

Hongwei Song	x deligner &	7 11/04/07
(type name of Inventor)	Signature of INVENTOR	Date
Vijayakumar Bhagavatula	Signature of INVENTOR	Date 11/01/02
(type name of Inventor)	Signature of INVENTOR	Date
Jingfeng Liu	Υ	
(type name of Inventor)	Signature of INVENTOR	Date
□ Notari:	zation or Legalization Page Added.	
Notanz	zation of Legalization Lage Added.	
NOTE: No witnessing, notarization or legalization	n is necessary. If the assignment is notarized or legalize	ed, then it will only be

3

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