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Docket No. AUS920020580US1

102488898

SEP 10 2003

DOCUMENT ID NO. 102349617A

To the Director of the United States Patent and Trademark Office: Please record the attached original documents or copy thereof.

<b>1. Name of conveying party(ies):</b>  <b>John Paul Harvey</b>  Additional name(s) of conveying party(ies) attached? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Execution Date:</b> January 10, 2003 <span style="font-size: 2em; margin-left: 200px;">6.30.03</span>
<b>2. Name and address of receiving party(ies):</b>  International Business Machines Corporation New Orchard Road Armonk, New York 10504	<b>3. Nature of conveyance:</b>  <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other _____

**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 \_\_\_\_\_

Title: BALL GRID ARRAY PACKAGE CONSTRUCTION WITH RAISED SOLDER BALL PADS

A. Patent Application No.(s) 10/346,277      B. Patent No.(s) \_\_\_\_\_

**5. Name and address of party to whom correspondence concerning document should be mailed:**

Robert M Carwell  
IBM Corporation  
Intellectual Property Law  
11400 Burnet Road  
Austin, TX 78758  
(512) 823-1017

**6. Total number of applications and patents involved: 1**

**7. Total fee (37 CFR 3.41) \$ 40.00**

Enclosed  
 Authorized to be charged to deposit account

**8. Deposit account number:**

50-0605

DO NOT USE THIS SPACE

**9. 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 document.

Gregory W. Carr  
Name of Person Signing

Signature

6/25/03  
Date

Total number of pages including cover sheet: 3

**PATENT**  
**REEL: 014223 FRAME: 0340**

01-28-2003



102349817

1-16-03

JC978 U.S. PTO  
20/346277  
01/16/03

To the Assistant Commissioner for Patents: Please record the attached original documents or copy thereof.

<p><b>1. Name of conveying party(ies):</b></p> <p>(1) Paul Marlan Harvey</p> <p>Additional name(s) of conveying party(ies) attached? ___ Yes ___ No</p>	<p><b>Execution Date:</b></p> <p>January 10, 2003</p>
<p><b>2. Name and address of receiving party(ies):</b></p> <p>International Business Machines Corporation New Orchard Road Armonk, New York 10504</p>	<p><b>3. Nature of conveyance:</b></p> <p><input checked="" type="checkbox"/> Assignment                      ___ Merger</p> <p>___ Security Agreement              ___ Change of Name</p> <p>___ Other _____</p>

4. Application number(s) or patent number(s):

20/346277

If this document is being filed together with a new application, the execution date of the application is

(1) 01-10-03

A. Patent Application No.(s) \_\_\_\_\_ B. Patent No.(s) \_\_\_\_\_

5. Name and address of party to whom correspondence concerning document should be mailed:

Robert M Carwell  
IBM Corporation  
Intellectual Property Law  
11400 Burnet Road  
Austin, TX 78758  
(512) 823-1017

6. Total number of applications and patents involved: 1

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\_\_\_ Enclosed  
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Robert M Carwell  
Name of Person Signing

*RM Carwell*  
Signature

1/16/03  
Date

01/27/2003 TDIAZ1 00000136 090447 20346277  
01 FC:8021 40.00 CH

Total number of pages including cover sheet: 2

**ASSIGNMENT**

Whereas, I,

Paul Marlan Harvey  
County of Williamson

of 8705 Fritsch Drive, Austin, Texas 78717  
and State of Texas

have invented certain improvement in

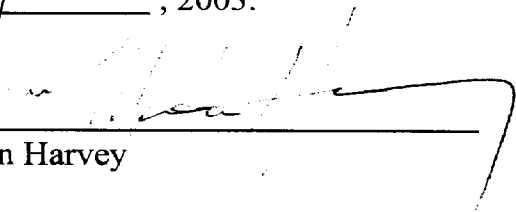
**BALL GRID ARRAY PACKAGE CONSTRUCTION  
WITH RAISED SOLDER BALL PADS**

and executed a United States patent application therefore on 1/10/, 2003.

Whereas, INTERNATIONAL BUSINESS MACHINES CORPORATION, a corporation of New York, having a place of business at Armonk, New York 10504, (hereinafter called IBM), desires to acquire the entire right, title and interest in the said application and invention, and to any United States and foreign patents to be obtained therefore;

Now therefore, for a valuable consideration, receipt whereof is hereby acknowledged, I, the above named, hereby sell, assign, and transfer to IBM, its successors and assigns, the entire right, title and interest in the said application and invention therein disclosed for the United States and foreign countries, and all rights of priority resulting from the filing of said United States application, and I request the Commissioner of Patents to issue any Letters Patent granted upon the invention set forth in said application to IBM, its successors and assigns; and I hereby agree that IBM may apply for foreign Letters Patent on said invention and I will execute all papers necessary in connection with the United States and foreign applications when called upon to do so by IBM.

Signed at Austin on 1/10/, 2003.

  
\_\_\_\_\_  
Paul Marlan Harvey

# CARR LLP

670 Founders Square  
900 Jackson Street  
Dallas, Texas 75202  
(214) 760-3000  
(214) 760-3003 (facsimile)

Gregory W. Carr  
E-Mail: GCarr@CarrIP.com  
(214) 760-3030 (direct dial)

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## CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited under 37 C.F.R. 1.8 with the United States Postal Service as first class mail in an envelope to the below addressee on June 25, 2003

Karen Roper  
Karen Roper

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Mail Stop Assignment Recordation Services  
Director of the United States Patent and Trademark Office  
P. O. Box 1450  
Alexandria, Virginia 22313-1450

Re: Request for Recordation of Assignment Document  
U.S. Patent Application No. 10/346,277  
Filed: January 16, 2003  
Docket No.: AUS920020580US1

Dear Sir:

In response to the Notice of Non-Recordation of Document dated June 3, 2003, please accept the enclosed Assignment and new cover sheet for recordation, as well as the previous cover sheet referencing the Document ID Number 102349617 to show payment of the recordation fee. Please note that the PTO sticker on the original Recordation Cover Sheet shows an incorrect serial number (a copy of the official Filing Receipt is attached hereto for your reference). It is believed that the original date of the filing of this Assignment document will be maintained and that no further fee is required.

Please send the Corrected Notice of Recordation of Assignment Document to the party listed under paragraph 5 of the recordation cover sheet.

Respectfully submitted,

CARR LLP

Date: 6/25/03

By: Gregory W. Carr  
Gregory W. Carr  
Reg. No. 31,093  
Attorney for Applicant

**PATENT**  
**REEL: 014223 FRAME: 0343**



Commissioner for Patents  
Washington, DC 20231  
www.uspto.gov

APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
10/346,277	01/16/2003	2841	1128	AUS920020580US1	5	41	3

CONFIRMATION NO. 3895

Gregory W. Carr  
670 founders Square  
900 Jackson Street  
Dallas, TX 75202

## FILING RECEIPT



\*OC00000009589326\*

Date Mailed: 03/04/2003

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections, facsimile number 703-746-9195. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

Paul Marlan Harvey, Austin, TX;

## Assignment For Published Patent Application

International Business Machines Corporation, Armonk, NY;

## Domestic Priority data as claimed by applicant

## Foreign Applications

If Required, Foreign Filing License Granted: 03/04/2003

Projected Publication Date: 07/22/2004

Non-Publication Request: No

Early Publication Request: No

## Title

Ball grid array package construction with raised solder ball pads

## Preliminary Class

361

RECORDED: 06/30/2003

PATENT  
REEL: 014223 FRAME: 0344