

10-27-1999

To the Honorable Commissioner of Patents and Trademarks:
Please record the attached original documents of copy there:



1. Name of conveying party for related assignment:
Name: ScanQuest Corporation

Additional name(s) of conveying party attached?

☒ No

3. Nature of Filing:

- ☐ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☒ Other RELATED APPLICATION ASSIGNMENT

Execution Date of Related Assignment: March 22, 1996

2. Name and address of conveying party for related assignment:

Name: Symbol Technologies, Inc.

Internal Address: One Symbol Plaza

Street Address: One Symbol Plaza

City: Holtsville :ST:NY Zip: 11742

Additional name(s) & address(es) attached ☐ Yes ☒ No

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)

09/208,284 08/569,728
09/073,501 08/363,985
08/690,752

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

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

Name: Michael S. Marcus, Esq.
MORGAN & FINNEGAN, L.L.P.
Internal Address: 1775 Eye Street, N.W., Suite 400
Street Address: 1775 Eye Street, N.W., Suite 400
City: Washington ST: DC Zip: 20006

6. Total number of applications involved: 5

7. Total fee (37 CFR 3.41) \$ 200.00
*Total fee (expedited svc) \$ ~~20.00~~ 120.00
TOTAL FEE \$ ~~220.00~~ 320.00

☒ Authorized to be charged to deposit account (including any fees inadvertently omitted)

8. Deposit Account number: 13-4500

ORDER NO.: 2301-4011

DO NOT USE THIS SPACE

9. Statement and signature: To the best of my knowledge and belief, the foregoing instrument is true and correct and any attached copy is a true copy of the original document.

Michael S. Marcus
Reg. No. 31,727
Name of Person Signing

Michael S. Marcus
Signature

October 21, 1999
Date

Total number of pages comprising cover sheet: 1

01-22-1997



RRD
1-22-97

To the Honorable Commissioner
Please record the attached Original 100330711 hereof.

1. Name of conveying party(ies):

Name: ScanQuest Corporation

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other _____

Execution Date: March 22, 1996

2. Name and address of receiving party(ies):

Name: Symbol Technologies, Inc.

Internal Address: One Symbol Plaza

Street Address: One Symbol Plaza

City: Rosetown ST: NY Zip: 11742

Additional name(s) & address(es) attached ☐ Yes ☒ No

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)
PCT/US93/1706
08/059,322
08/058,951
08/262,152
08/262,785
07/956,646
08/329,257
08/307,911
08/410,509
08/444,387

B. Patent No.(s)
5,291,009
5,349,172
5,345,977
5,484,994
D356,559

Additional numbers attached? ☐ Yes ☒ No

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

Name: Mauro Premutico, Esq.
Internal Address: Symbol Technologies, Inc.
One Symbol Plaza
Street Address: One Symbol Plaza
City: Rosetown ST: NY Zip: 11742

6. Total number of applications and patents involved: 15

7. Total fee (37 CFR 3.41) 600.00
Total fee (expedited svc) 30.00
TOTAL FEE 630.00

☐ Enclosed

☒ Authorized to be charged to deposit account (including any fees inadvertently omitted)

8. Deposit Account number: 13-4500

(Attach duplicate copy of this page if paying by deposit account)

ORDER NO.: 2301-4007

DO NOT USE THIS SPACE

Chg all fees to 30 spec fee

9. Statement and signature.

To the best of my knowledge and belief, the foregoing instrument is true and correct and any attached copy is a true copy of the original document.

Michael S. Marcus

Reg. No. 31,727

Name of Person Signing

Signature

Date

ASSIGNMENT


WHEREAS, ScanQuest Corporation, hereinafter called "ASSIGNOR", a California Corporation, is the owner of the patent applications and issued patents attached hereto as Exhibit 1. (Hereinafter the "PATENTS")

WHEREAS, SYMBOL TECHNOLOGIES, INC., hereinafter called "ASSIGNEE", a corporation organized and existing under the laws of the State of Delaware and having an office for the transaction of business at One Symbol Plaza, Holtsville, NY 11742, desires to acquire the entire right, title and interest in and to said PATENTS, and in and to said invention described and claimed in said PATENTS, and in and to any Letters Patent which may be obtained upon said PATENTS for said invention therein contained.

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN, be it known that for and in them hand paid, and of other good and valuable consideration, the receipt of all of which is hereby acknowledged, the said ASSIGNORS have sold, assigned and transferred, and do hereby sell, assign and transfer unto the said ASSIGNEE, its successors and assigns, the entire right, title and interest in and to said PATENTS and any continuations or continuations-in-part thereof, and in and to any Letters Patent which may be obtained thereon or therefor in the United States of America and all foreign countries, and in and to any reissues or extensions of any Letters Patent which may be granted for said invention, and in and to any improvements, additions to, or modifications of said invention, which the said ASSIGNORS may acquire by invention or otherwise, the same to be held and enjoyed by the said ASSIGNEE for its own use and benefit, and for the use and benefit of its successors and assigns, to the full end of the term for which said Letters Patent or any reissues or extensions thereof may be granted, as fully and as entirely as the same might be held by said ASSIGNORS had this sale not been made, and the said ASSIGNORS hereby represent and warrant that they have not executed and will not execute any instrument inconsistent with the rights granted herein, and they hereby bind themselves and their heirs, executors, administrators and legal representatives to execute any and all papers and instruments and to do any and all acts which may be necessary or required by the said ASSIGNEE, in order to carry into full force and effect this sale, assignment and transfer, and the said ASSIGNORS further represent and warrant that they hereby bind themselves and their heirs, executors, administrators and legal representatives to communicate at any time, upon request to the said ASSIGNEE, its successors and assigns any facts relating to the said invention and the history thereof known to them or to their heirs, executors, administrators and legal representatives, and that they will testify as to the same in any interference to obtain or any other litigation to enforce the PATENTS which have been or may be granted for said invention when requested to do so by the said ASSIGNEE, its successors or assigns.

The said ASSIGNORS hereby authorize and request the Commissioner of Patents and Trademarks to issue any Letters Patent which may be granted for said invention to the said ASSIGNEE as the assignee of the entire right, title and interest therein.

IN WITNESS WHEREOF, the said ASSIGNORS have hereunto set their hands and affixed their seal as of the date and year first below written.

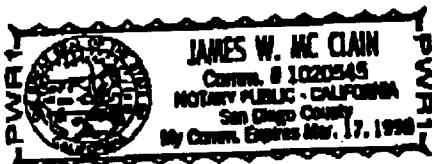

(Name) Alex Roustaei


Alexander Roustaei
(Typed name)

ScanQuest Corporation
(Company)

NOTARY:

On this 22^d day of March, 1996, before me personally came Alexander Roustaei to me known and known to me to be the individual named in and who executed the foregoing instrument, and he duly acknowledged to me that he executed the same.




Notary Public

CERTIFICATION

Attached hereto is a true and accurate copy of the ASSIGNMENT which was executed by Alexander Roustaei in my presence on March 22, 1996, as evidenced by my signature and official notary seal.

Dated: 1/21/97

James W. McClain
James W. McClain

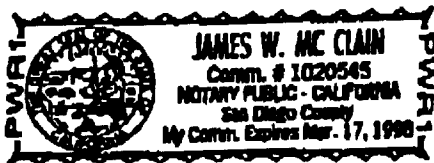


Exhibit -1-

SCANQUEST PATENTS AND APPLICATIONS

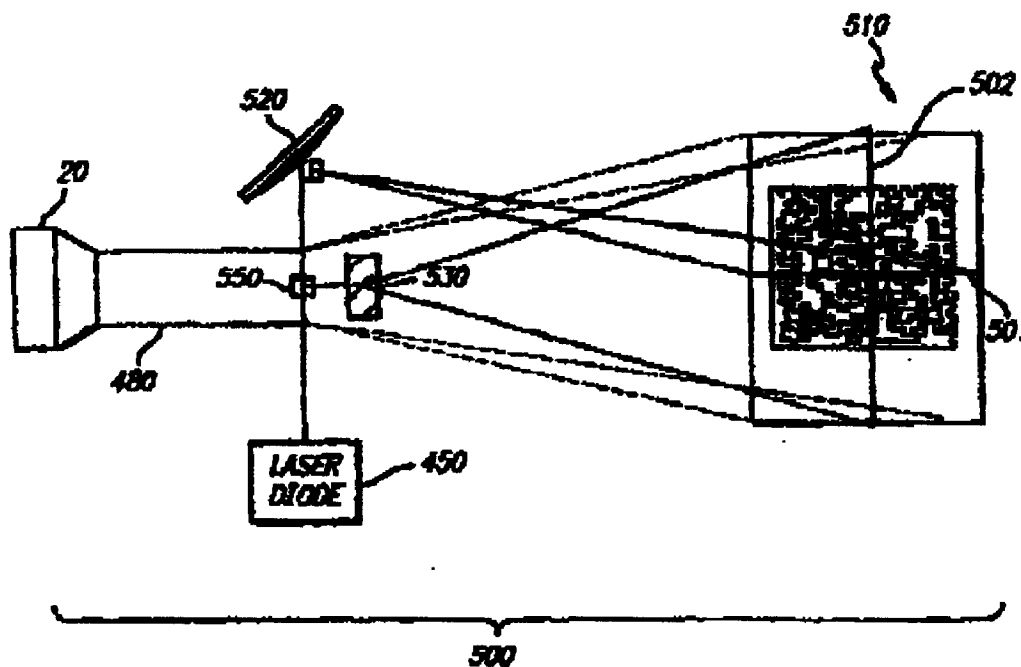
No.	DESCRIPTION	INTERNAL BMH&M #	DATE FILED	PAT. OFFICE SERIAL #	PATENT /TM #	STATUS
1	Optical Scan Head	5684 PA05	2/27/92	07/843,266	5,291,009	Patent Granted
2	Optical Scan Head	5684 PA01	10/2/92	07/956,646	5,349,172	Patent Granted
3	Optical Scan Head CIP - 2D	5684 PA02	10/23/92	07/965,991	5,345,977	Patent Granted
4	PCT Application Optical Scan Head	5684 PCT01	2/25/93	PCT/US93/ 1706		Patent Pending
5	Method for Fixed Focus CCD Imaging	5684 PA03	5/7/93	08/059,322		Patent Pending
6	Three Dimensional Optical Scanning Code and Device for Reading Same	5684 PA04	5/7/93	08/058,951		Patent Pending
7	Optical Scanning Head with Improved Resolution	5684 PA06	10/18/93	08/137,426	5,484,994	Patent Granted
8	Housing for Optical Scan Head	5684 DP01	10/20/93	29/044,800	D356559	Patent Granted
9	Housing for Hands Free Scanner	5684-DP02	6/13/94			Patent Pending
10	Improved Optical Scan Head for 2D Symbology	5684-PA08	6/13/94	08/262,152		Patent Pending
11	Optical Scanner with Automatic Activation	5684-PA07	6/20/94	08/262,785	Notice of Allowance	
12	Divisional Application for Optical Scan Head	5684 PA010	7/30/94	07/956,646		Patent Pending
13	Two Dimensional Scanner - Image Grabber	5684-PA09	9/20/94	08/329,257		Patent Pending
14	Optical Scan Head - Taiwan	5684PF-3TAW	9/20/94	08/329,257	NI-073055	Patent Granted
15	Optical Scan Head	5684-PA01D	9/16/94	08/307,911	Notice of Allowance	
16	Optical Scan Head	5684-RED5	3/20/95	08/410,509	Notice of Allowance	
17	Optical Scan Head - Japan	5684-01QP	3/28/95	5-515079		Patent Pending
18	System For Reading And Comparing 2D images Using ambient and/or Projected Light	5684-PA09CP	5/19/95	08/444,387		Patent Pending
19	European PA"Optical Scan Head	5684PF1EPO	2/25/93	93907045.4		Patent Pending
20	Optical Scanner for reading and decoding 1&2D @ variable DOF	5684-PA1CP	12/08/95			Patent Pending



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : G02B 26/08, 26/10, 6/32, G06K 7/10, H01L 21/60, H01J 3/14	A1	(11) International Publication Number: WO 98/50814 (43) International Publication Date: 12 November 1998 (12.11.98)
(21) International Application Number: PCT/US98/09092 (22) International Filing Date: 5 May 1998 (05.05.98) (30) Priority Data: 60/045,542 5 May 1997 (05.05.97) US (71)(72) Applicant and Inventor: ROUSTAEL, Alexander, R. [PR/US]; 2454 Rus Drive, La Jolla, CA 92037 (US). (74) Agents: BROOK, Mitchell, F.; Baker & McKenzie, 12th floor, 101 West Broadway, San Diego, CA 92101 (US) et al.		(81) Designated States: AU, CA, JP, KR, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> <i>With amended claims and statement.</i>

(54) Title: **OPTICAL SCANNER AND IMAGE READER FOR READING IMAGES AND DECODING OPTICAL INFORMATION INCLUDING ONE AND TWO DIMENSIONAL SYMBOLOGIES AT VARIABLE DEPTH OF FIELD**



(57) Abstract

An integrated system and method for reading image data. An optical scanner/image reader (15) is provided for reading images and decoding optical information or code, including one (28) and two dimensional (27) symbologies at variable depth of field, including memory (212) and image processing (210) for high speed applications.

**OPTICAL SCANNER AND IMAGE READER FOR
READING IMAGES AND DECODING OPTICAL
INFORMATION INCLUDING ONE AND TWO DIMENSIONAL
SYMBOLOLOGIES AT VARIABLE DEPTH OF FIELD**

Priority is claimed from Provision Application Ser. No. 60/010,168, filed May 5, 1997, entitled, "Optical Scanner/Image Reader for Reading Images and Decoding Optical Information or Code, Including One and Two Dimensional Symbolologies at Variable Depth of Field, Including Memory and Image Processing for High Speed Applications."

This is a continuation-in-part of application Serial No. 08/690,752 filed August 1, 1996, which is a continuation-in-part of application Serial No. 08/569,728 filed December 8, 1995, which is a continuation-in-part of application Serial No. 08/363,985, filed December 27, 1994, which is a continuation-in-part of application Serial No. 08/059,322, filed May 7, 1993, which is a continuation-in-part of application Serial No. 07/965,991, filed October 23, 1992, now issued as Patent No. 5,354,977, which is a continuation-in-part of application Serial No. 07/956,646, filed October 2, 1992, now issued as Patent No. 5,349,172, which is a continuation-in-part of application Serial No. 08/410,509, filed March 24, 1995 which is a re-issue application of application 07/843,266, filed February 27, 1992, now issued as Patent No. 5,291,009. This is also a continuation-in-part of application Serial No. 08/137,426, filed October 18, 1993, and a continuation-in-part of application Serial No. 08/444,387, filed May 19, 1995, which is a continuation-in-part of application Serial No. 08/329,257, filed October 26, 1994.

Field of the Invention

This invention generally relates to a scanning or imaging system for reading and/or analyzing optically encoded information or images and more particularly to a system "on-chip" with intelligence for grabbing, analyzing and/or processing images within a frame.

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6:

G06K 7/10

A1

(11) International Publication Number:

WO 99/30269

(43) International Publication Date:

17 June 1999 (17.06.99)

(21) International Application Number:

PCT/US98/26056

(22) International Filing Date:

8 December 1998 (08.12.98)

(30) Priority Data:

60/067,913	8 December 1997 (08.12.97)	US
60/070,043	30 December 1997 (30.12.97)	US
60/072,418	24 January 1998 (24.01.98)	US
09/073,501	5 May 1998 (05.05.98)	US

(71)(72) Applicant and Inventor: ROUSTABI, Alexander, R.
[FR/US]; 2434 Rue Denise, La Jolla, CA 92037 (US).

(74) Agents: BROOK, Mitchell, P.; Baker & McKenzie, 12th floor,
101 West Broadway, San Diego, CA 92101 (US) et al.

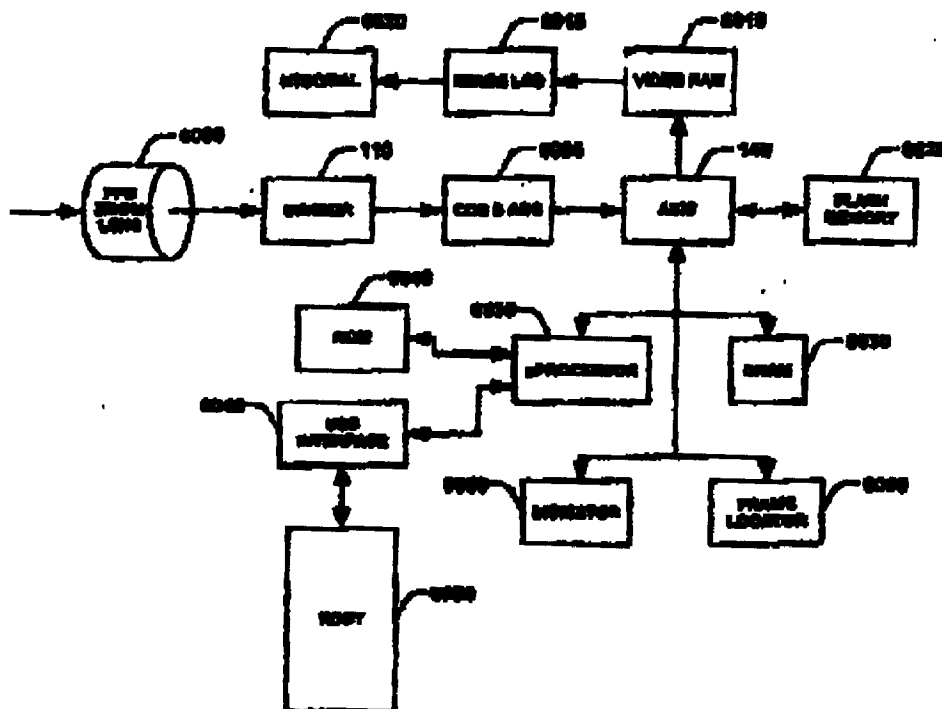
(31) Designated States: AU, CA, JP, KR, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GR, IE, IT, LU, MC, NL, PT, SE).

Published

With international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: SINGLE CHIP SYMBOLOGY READER WITH SMART SENSOR



(57) Abstract

An integrated system and method for reading image data. An optical scanner/image reader is provided for grabbing images, storing data and/or decoding optical information or code in a memory (6030), including one and two dimensional symbologies, at variable depth.

SINGLE CHIP SYMBOLOGY READER WITH SMART SENSOR

Priority is claimed from Provision Application Serial No. 60/067,913, filed December 8, 1997, entitled, "Optical Scanner and Image Reader For Grabbing Images, Storing Data And / Or Decoding Optical Information or Code, Including One And Two Dimensional Symbologies, At Variable Depth Of Field, Featuring "On-Chip" Intelligent Including Sensor And Processing Means", as well as from Provision Application Serial No. 60/070,043, filed December 30, 1997, entitled, "Optical Scanner/Image Reader For Grabbing Images, Storing Images And/Or Data And / Or Decoding Optical Information or Code, Including One And Two Dimensional Symbologies, At Variable Depth of Field, Featuring "On-Chip" Intelligence Including Sensor And Processing Means", as well as from Provisional Application Serial No. 60/072,418, filed January 24, 1998, entitled, "Optical Image Reader For Grabbing Images, Storing Images And / Or Decoding Images And / Or Data And / Or Optical Information or Code, At Variable Depth of Field, Including Sensor And Processing Means. The Optical Code is Variable in Size, Shape, Format and Color and can use One, Two and Three Dimensional Symbology Structure", all of which are referred to and incorporated herein by reference.

This is a continuation-in-part of United States application Serial No. 09/073,501, filed May 5, 1998, which is a continuation-in-part of U.S. application Serial No. 08/690,752 filed August 1, 1996, which is a continuation-in-part of application Serial No. 08/369,728 filed December 8, 1995, which is a continuation-in-part of application Serial No. 08/363,985, filed December 27, 1994, which is a continuation-in-part of application Serial No. 08/059,322, filed May 7, 1993, which is a continuation-in-part of application Serial No. 07/965,991, filed October 23, 1992, now issued as Patent No. 5,354,977, which is a continuation-in-part of application Serial No. 07/956,646, filed October 2, 1992, now issued as Patent No. 5,349,172, which is a continuation-in-part of application Serial No. 08/410,509, filed March 24, 1995 which is a re-issue application of application 07/843,266, filed February 27, 1992, now issued as Patent No. 5,291,009. This is also a continuation-in-part of application Serial No. 08/137,426,

filed October 18, 1993, and a continuation-in-part of application Serial No. 08/444,387, filed May 19, 1995, which is a continuation-in-part of application Serial No. 08/329,257, filed October 26, 1994, all of which are referred to and incorporated herein by reference.

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FIELD OF THE INVENTION

This invention generally relates to a scanning and imaging system for reading and/or analyzing optically encoded information or images and more particularly to a system on a computer chip with intelligence for grabbing, analyzing and/or processing images within a frame.

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BACKGROUND OF THE INVENTION

Industries such as assembly processing, grocery and food processing, transportation, and multimedia utilize an identification system in which the products are marked with an optical code such as a bar code symbol consisting of a series of lines and spaces of varying widths, or other type of symbols consisting of series of contrasting markings. These codes are generally known as two dimensional symbology. A number of different optical code readers and laser scanning systems are capable of decoding the optical pattern and translating it into a multiple digit representation for inventory, production tracking, check out or sales. Some optical reading devices are also capable of taking pictures and displaying, storing, or transmitting real time images to another system.

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Optical readers or scanners are available in a variety of configurations. Some are built into a fixed scanning station while others are portable. Portable optical reading devices provide a number of advantages, including the ability to take inventory of products on shelves and to track items such as files or small equipment. A number of these portable reading devices incorporate laser diodes to scan the symbology at variable distances from the surface on which the optical code is imprinted. Laser scanners are expensive to manufacture, however, and can not reproduce the image of the targeted area by the sensor, thereby limiting the field of use of optical code reading devices. Additionally, laser scanners typically require a raster scanning technique to read and decode a two dimensional optical code.

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