Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents & Trademarks, Box Assignments Washington, D.C. 20231

Attorney's Docket No.: <u>ALT.P003</u> **PATENT**

ASSIGNMENT

In consideration of good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Volker Mauer, the undersigned Assignor(s), believing to be the original, first and sole or joint inventor(s) of any and all new and useful improvements disclosed in the application for the United States patent entitled Method and Apparatus for Implementing a Two Dimensional Correlator hereby sell, assign, and transfer to Altera Corporation a Delaware corporation, having a principal place of business at 101 Innovation Drive San Jose, CA 95134, ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all improvements that are disclosed in the same patent application which has been executed by the undersigned prior hereto or concurrently herewith on the dates indicated below.

The undersigned further sell, assign, and transfer to Assignee said application and all divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said improvements; and in and to all rights of priority resulting from the filing of said United States application; and the right to file foreign applications directly in the name of the Assignee and to claim for any such foreign applications any priority rights to which such applications are entitled under international conventions, treaties or otherwise.

The undersigned further agree that said Assignee may apply for and receive a patent or patents for said improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions and all other patent applications on any and all said improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and representatives all facts known to the undersigned relating to said improvements and the history thereof; and generally assist said Assignee, its successors, assigns, or representatives in securing and maintaining proper patent protection for said improvements and for vesting title to said improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives.

The undersigned covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

PATENT REEL: 012283 FRAME: 0296 The undersigned hereby authorize and request the Officials of the United States Patent and Trademark Office and any and all foreign Patent Offices to issue any and all Letters Patents, when granted, to said Assignee as the assignee of the entire right, title and interest in and to the same, for the sole use of said Assignee, its successors and assigns, to the full end of the term for which said Letters Patents may be granted.

The undersigned hereby grant to Lawrence M. Cho, Attorney for Applicant, located at P.O. Box 2144 Champaign, IL, 61825, the power to insert on this document any further identification necessary or desirable to comply with the rules of the United States Patent and Trademark Office for recordation of this Assignment.

Each Inventor/Assignor: Please Sign and Date Below:

<u>SEPTEMBER 17, 20 01</u>

Date

Name:

Volker Mayer

Please also list date you signed the accompanying DECLARATION if Assignment is executed with a new filing:

SEP. 17, 20 01

Date

| Please type a plus sign (+) inside this box -> + | Please | type : | a plus | sian | (+) | inside | this | box | \rightarrow | Ī |
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PTO/SB/21 (08-00)

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(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Signature

| Application Number | 09/892,051 | |
|------------------------|-------------------|---|
| Filing Date | June 26, 2001 | |
| First Named Inventor | Volker Mauer | |
| Group Art Unit | 2631 | . , , , , , , , , , , , , , , , , , , , |
| Examiner Name | Not Yet Available | |
| Attorney Docket Number | ALT.P003 | |

| | ENCLOSURES (| check all that apply) | | | |
|--|--|---|--|--|--|
| X Fee Transmittal Form | X Assignment Papers (for an Application) | After Allowance Communication to Group | | | |
| X Fee Attached | Drawing(s) | Appeal Communication to Board of Appeals and Interferences | | | |
| Amendment / Reply | Licensing-related Papers | Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) | | | |
| After Final | Petition Potition to Convert to a | Proprietary Information | | | |
| Affidavits/declaration(s) | Petition to Convert to a Provisional Application | Status Letter | | | |
| Extension of Time Request | Power of Attorney, Revocation Change of Correspondence Address | Other Enclosure(s) (please identify below): | | | |
| Express Abandonment Request | Terminal Disclaimer Request for Refund | Assignment Recordation Form | | | |
| Information Disclosure Statement | CD, Number of CD(s) | Credit Card Payment Form | | | |
| Certified Copy of Priority Document(s) | Remarks | Postcard | | | |
| Response to Missing Parts/ Incomplete Application | | | | | |
| Response to Missing Parts under 37 CFR 1.52 or 1.53 | | | | | |
| SIGNATU | JRE OF APPLICANT, ATTORNE | Y, OR AGENT | | | |
| Firm or Individual name Lawrence M. Ch | 0 | | | | |
| Signature Law M | . Cho | | | | |
| Date October 11, 2001 | | | | | |
| CERTIFICATE OF MAILING | | | | | |
| I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, DC 20231 on this date: October 11, 2001 | | | | | |
| Typed or printed name Lawrence M | /I. Cho | | | | |

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October 11, 2001

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FEE TRANSMITTAL for FY 2002

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT

(\$) 40.00

| Complete if Known | | | |
|----------------------|-------------------|--|--|
| Application Number | 09/892,051 | | |
| Filing Date | June 26, 2001 | | |
| First Named Inventor | Volker Mauer | | |
| Examiner Name | Not Yet Available | | |
| Group Art Unit | 2631 | | |
| Attorney Docket No. | ALT.P003 | | |

| METHOD OF PAYMENT | FEE CALCULATION (continued) | | | | | |
|---|--|-------------|--|--|--|--|
| 1. X The Commissioner is hereby authorized to charge indicated fees and credit any overnayments to: | 3. ADDITIONAL FEES | | | | | |
| indicated fees and credit any overpayments to: Deposit | Large Small | | | | | |
| Account Number 501624 | Entity Entity Fee Fee Fee Fee Fee Fee Fee Fee Fee Fe | ee Paid | | | | |
| Deposit | Code (\$) Code (\$) | | | | | |
| Account Lawrence Cho | 105 130 205 65 Surcharge - late filing fee or oath | | | | | |
| Charge Any Additional Fee Required Under 37 CFR 1,16 and 1,17 | 127 50 227 25 Surcharge - late provisional filing fee or cover sheet | | | | | |
| Applicant claims small entity status. | 139 130 139 130 Non-English specification | | | | | |
| See 37 CFR 1.27 | 147 2,520 147 2,520 For filing a request for ex parte reexamination | | | | | |
| 2. X Payment Enclosed: Check X Credit card Money Other | 112 920* 112 920* Requesting publication of SIR prior to Examiner action | | | | | |
| FEE CALCULATION | 113 1,840* 113 1,840* Requesting publication of SIR after Examiner action | | | | | |
| 1. BASIC FILING FEE | 115 110 215 55 Extension for reply within first month | | | | | |
| Large Entity Small Entity | 116 400 216 200 Extension for reply within second month | | | | | |
| Fee Fee Fee Fee Description | 117 920 217 460 Extension for reply within third month | | | | | |
| Code (\$) Code (\$) Fee Paid 101 740 201 370 Utility filing fee | 118 1,440 218 720 Extension for reply within fourth month | | | | | |
| 106 330 206 165 Design filing fee | 128 1,960 228 980 Extension for reply within fifth month | | | | | |
| 107 510 207 255 Plant filing fee | 119 320 219 160 Notice of Appeal | | | | | |
| 108 740 208 370 Reissue filing fee | 120 320 220 160 Filing a brief in support of an appeal | | | | | |
| 114 160 214 80 Provisional filing fee | 121 280 221 140 Request for oral hearing | | | | | |
| 011777AL (4) (6) 0.00 | 138 1,510 138 1,510 Petition to institute a public use proceeding | | | | | |
| SUBTOTAL (1) (\$) 0.00 | 140 110 240 55 Petition to revive - unavoidable | | | | | |
| 2. EXTRA CLAIM FEES Fee from | 141 1,280 241 640 Petition to revive - unintentional | | | | | |
| Extra Claims below Fee Paid | 142 1,280 242 640 Utility issue fee (or reissue) | | | | | |
| Total Claims20** = X = | 143 460 243 230 Design issue fee | | | | | |
| Independent Claims - 3** = X = | 144 620 244 310 Plant issue fee | | | | | |
| Multiple Dependent | 122 130 122 130 Petitions to the Commissioner | | | | | |
| Loren Fréibus . 11 Full | 123 50 123 50 Processing fee under 37 CFR 1.17(q) | | | | | |
| Large Entity Small Entity Fee Fee Fee Fee Pescription | 126 180 126 180 Submission of Information Disclosure Stmt | | | | | |
| Code (\$) Code (\$) 103 18 203 9 Claims in excess of 20 | 581 40 581 40 Recording each patent assignment per property (times number of properties) | 0.00 | | | | |
| 102 84 202 42 Independent claims in excess of 3 | 146 740 246 370 Filing a submission after final rejection (37 CFR § 1.129(a)) | | | | | |
| 104 280 204 140 Multiple dependent claim, if not paid 109 84 209 42 ** Reissue independent claims | 149 740 249 370 For each additional invention to be examined (37 CFR § 1.129(b)) | | | | | |
| over original patent | 179 740 279 370 Request for Continued Examination (RCE) | | | | | |
| 110 18 210 9 ** Reissue claims in excess of 20 and over original patent | 169 900 169 900 Request for expedited examination | | | | | |
| SUBTOTAL (2) (\$) 0.00 | of a design application Other fee (specify) | | | | | |
| **or number previously paid, if greater; For Reissues, see above | *Reduced by Basic Filing Fee Paid SUBTOTAL (3) (\$) 40.0 | 0 | | | | |

| SUBMITTED BY Complete (# | | | | | applicable) |
|--------------------------|-----------------|-----------------------------------|--------|-----------|------------------|
| Name (Print/Type) | Lawrence M. Cho | Registration No. (Attorney/Agent) | 39.942 | Telephone | (217) 377-2500 |
| Signature | L_m. Cha | | | Date | October 11, 2001 |

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PATENT

REEL: 012283 FRAME: 0299

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| | | | for | FY | 200 |)2 | |

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT

(\$) 40.00

| Complete if Known | | | | |
|----------------------|-------------------|--|--|--|
| Application Number | 09/892,051 | | | |
| Filing Date | June 26, 2001 | | | |
| First Named Inventor | Volker Mauer | | | |
| Examiner Name | Not Yet Available | | | |
| Group Art Unit | 2631 | | | |
| Attorney Docket No. | ALT.P003 | | | |

| METHOD OF PAYMENT | FEE CALCULATION (continued) | | | | | |
|---|--|----------|--|--|--|--|
| The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to: | 3. ADDITIONAL FEES | | | | | |
| indicated fees and credit any overpayments to: Deposit | Large Small | | | | | |
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| Deposit | Code (\$) Code (\$) | | | | | |
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| FEE CALCULATION | 113 1,840* 113 1,840* Requesting publication of SIR after Examiner action | | | | | |
| 1. BASIC FILING FEE | 115 110 215 55 Extension for reply within first month | | | | | |
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| | 138 1,510 138 1,510 Petition to institute a public use proceeding | | | | | |
| SUBTOTAL (1) (\$) 0.00 | 140 110 240 55 Petition to revive - unavoidable | | | | | |
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| Multiple Dependent | 122 130 122 130 Petitions to the Commissioner | | | | | |
| Lanca Fullita a company | 123 50 123 50 Processing fee under 37 CFR 1.17(q) | | | | | |
| Large Entity Small Entity Fee Fee Fee Fee Fee Description | 126 180 126 180 Submission of Information Disclosure Stmt | | | | | |
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| and over original patent | 169 900 169 900 Request for expedited examination of a design application | | | | | |
| SUBTOTAL (2) (\$) 0.00 | Other fee (specify) | | | | | |
| **or number previously paid, if greater, For Reissues, see above | *Reduced by Basic Filing Fee Paid SUBTOTAL (3) (\$) 40. | 00 | | | | |

| SUBMITTED BY Complete (if applicable) | | | | | |
|--|----------|--|--|----------------|------------------|
| Name (PrintiType) Lawrence M. Cho Registration No. (Attorney/Agent) 39,942 Telephone (217) 3 | | | | (217) 377-2500 | |
| Signature | La m. Ch | | | Date | October 11, 2001 |

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RECORDED: 10/15/2001

PATENT

REEL: 012283 FRAME: 0300