

MEMS AND NANOTECHNOLOGY EXCHANGE FABRICATION SITE AGREEMENT

CHECKLIST FOR PROCESSING MEMS AND NANOTECHNOLOGY EXCHANGE FABRICATION SITE AGREEMENT

In order to facilitate the processing of your Fabrication Site Agreement, please follow the guidelines set forth below.

1. Fabrication Site should download the Fabrication Site Agreement as a Portable Document Format (PDF) file, and print the Fabrication Site Agreement.
2. Type or print all information legibly, including, in particular, the e-mail address of the person signing the Fabrication Site Agreement on behalf of Fabrication Site.
3. Sign in the Fabrication Site signature block only.
4. Return the entire signed Fabrication Site Agreement by fax to: 703-262-5367 or by mail to: Corporation for National Research Initiatives

MEMS and Nanotechnology
Exchange Attn: Dr. Michael A. Huff
1895 Preston White Drive
Suite 100
Reston, VA 20191-5434

5. Any questions concerning this Agreement should be sent via e-mail to: business@MEMS-Exchange.org.

MEMS AND NANOTECHNOLOGY EXCHANGE FABRICATION SITE AGREEMENT (FA-16)

Fabrication Site wishes to participate in the MEMS and Nanotechnology Exchange[®] and make selected microfabrication processes available to the domestic community in the United States for educational, training, research, or experimental purposes in accordance with this MEMS and Nanotechnology Exchange Fabrication Site Agreement ("Agreement").

1. PARTIES. The Parties to this Agreement are Corporation for National Research Initiatives, having an office at 1895 Preston White Drive, Reston, VA 20191-5434 ("CNRI" or "MNX") and Fabrication Site, as designated below. CNRI is a non-profit, 501(c)(3) organization, formed for the purpose of fostering and carrying out research, studies, programs, and educational activities in order to stimulate scientific research and development in information processing. This Agreement incorporates the MNX Policies & Procedures which are attached hereto as Appendix A, and incorporated herein by reference. The Agreement will be effective from the date the later of the two Parties has signed below, for a period of one (1) year, with automatic renewal for successive periods of one (1) year each, unless the Agreement is terminated as provided herein.

2. SCOPE. a. Except as otherwise specifically agreed in writing among the Parties, Fab Site agrees to assist and cooperate with the MNX in the establishment of a high-quality distributed processing environment for fabricating, processing, packaging, testing, and other operations related to the embodiment of MEMS devices and systems on a pay-for-service basis. Fab Site hereby agrees to cooperate with CNRI in establishing the MNX as an open, accessible resource in the Internet environment.

b. Fab Site agrees to use its best efforts to perform fabrication services for Customers of the MNX in a timely manner and on a "first come first served" basis. It is understood, however, that acceptance by Fab Site of requests for performance of such fabrication services is at Fab Site's absolute and sole discretion. "Customer" shall mean a domestic entity, i.e. an organization created or organized under the laws of the United States of America ("USA"), or any State therein, Commonwealth or territory thereof, or the District of Columbia, or an individual who

is a citizen or permanent resident of the USA, who contracts with the MNX for design, microfabrication, processing, packaging, and testing of MEMS devices and systems. It is expected that there will be noncommercial, as well as commercial, Customers.

c. CNRI will not act as a buyer or seller in connection with the services provided by the Fabrication Site to the Customer. Rather, CNRI's role in the MNX is to act as an intermediary or a broker to ensure that the MNX is operated in a manner that supports advanced scientific research and fosters cooperative research activities on behalf of the public good.

3. FABRICATION SERVICES. a. Fab Site shall offer fabrication services hereunder as mutually agreed upon by the Parties, or as otherwise provided herein.

b. Fab Site shall inform the MNX in a timely manner of any fabrication specific terms and conditions (including, but not limited to, warranties, disclaimers of liability, etc.), if any, that apply to specific Processing Steps and Sequences ("Processes"). While the MNX agrees to cooperate with Fab Site in providing information to Customers regarding Fab Site's fabrication services available hereunder, it is understood that Fab Site is solely responsible, and CNRI is not responsible, for enforcing any specific terms and conditions that apply to its Processes.

c. Fab Site will work with the MNX in developing a mechanism to allow the MNX to add new fabrication services that Fab Site wishes to make available to the domestic community through the MNX. It is understood, however, that the ultimate decision as to which Processes shall be offered by Fab Site to CNRI for purposes of the MNX shall be made by Fab Site. Fab Site agrees to furnish the MNX, on a periodic basis, with the most relevant, up-to-date information concerning the availability of its Processes, technical process data, and prices of said Processes for this purpose.

4. RULES AND PROCEDURES. Fabrication Services shall be performed in accordance with the MNX Policies & Procedures attached hereto as Appendix A, and the following rules and procedures, unless otherwise agreed upon in writing among the Parties:

a. Based on Fab Site's assessment of risk of damage or contamination posed by processing a Customer's wafers, masks or other materials, Fab Site may, at its sole and absolute discretion, decide not to perform a Work Request or Work Order for a Customer. The rejection of a Work Request or Work Order by Fab Site must be justified with a written explanation of the reason for the rejection sent to the MNX by electronic mail addressed to Dr. Michael Huff at <mhuff@mems-exchange.org> within five (5) business days from receipt of a Work Request or Work Order from the MNX. Unless otherwise notified by Fab Site, any such exchange of information may be used by the MNX to annotate Fab Site's list of Processes available at the MNX with respect to the specific conditions under which a Process may be made available.

b. After a Work Order is placed by a Customer, the MNX will coordinate with the Customer to make the necessary arrangements for transport of wafers, masks, and other materials hereunder, unless otherwise agreed. MNX will inform Fab Site about any agreements made with transportation facilities to be used by Fab Site, as appropriate, and Fab Site agrees to use such carriers and comply with instructions received by the MNX for transportation for purposes of this Agreement. Fab Site shall be responsible for adequately packaging Customer's wafers, masks, and other materials, and to use its best efforts to facilitate the movement of this material among fabrication sites. The costs for shipping and insurance of materials will be paid for by the MNX to be reimbursed by Customer. Fab Site will take reasonable precautions to ensure that MNX Customers' wafers, masks or other material while at Fab Site are handled in accordance with standard procedures in the microfabrication industry.

c. While the MNX shall use its best efforts to provide sufficient information to the Fab Site to enable the Fab Site to make a decision on whether to accept or reject a particular Work Request or Work Order received from the MNX, it is specifically agreed by the Parties that any such information provided to Fab Site by Customer through the MNX is for the purpose of allowing the Fab Site to make an independent determination concerning the potential contamination or damage risks posed by processing the Customer's wafers, masks, or other materials. It is Fab Site's responsibility to

protect its own facilities from contamination or damage.

d. The MNX will establish a quality control and verification protocol for the services offered through the MNX. The MNX may perform quality control measurements on each of the Processes offered by the Fab Site, and, unless otherwise agreed by the Parties, the MNX will make this information available to potential Customers at the MNX.

e. Fab Site shall notify the MNX in a timely manner (typically one business day or less) of any significant problems or events that could affect the overall schedule or progress of the effort hereunder. Unless otherwise agreed among the Parties, Fab Site will provide necessary information to allow the MNX to develop software tools and procedures to enable the Customers and the MNX to be informed in a timely fashion about the status of Work Orders.

5. INVOICING. Reimbursement for fabrication services shall be paid to Fab Site monthly by CNRI upon submission of invoices by Fab Site showing a cost breakdown in a format acceptable to CNRI. A monthly invoice shall be submitted to CNRI within thirty (30) days after the end of the month for those months in which processing services were performed by the Fab Site, detailing the specific fabrication work performed by Fab Site for Customers of the MNX. Invoices should be itemized by a unique identification number (i.e. run number) provided by CNRI such that the individual items can be clearly identified, and the invoices should be sent to the CNRI Administrative contact below.

6. ADMINISTRATIVE RESPONSIBILITIES.

Except as otherwise provided herein, or as subsequently agreed upon in writing among the Parties, all notices, requests, and other communications required or permitted under this Agreement shall be in writing, and delivered to the appropriate address listed below (or as subsequently changed by written notification). For purposes of this Agreement, electronic mail and facsimile are considered to be written communications.

IN THE CASE OF CNRI:

For Administrative Matters:

Ms. Christy Short
MEMS and Nanotechnology Exchange
CNRI
1895 Preston White Drive, Suite 100
Reston, VA 20191-5434
Phone: (703) 262-5362
Fax: (703) 262-5367
E-mail: cshort@mems-exchange.org

For Technical Matters:
Dr. Michael A. Huff
MEMS and Nanotechnology Exchange
CNRI
1895 Preston White Drive, Suite 100
Reston, VA 20191-5434
Phone: (703) 262-5368
Fax: (703) 262-5367
E-mail: mhuff@mems-exchange.org

IN THE CASE OF FABRICATION SITE:

For Administrative Matters:
Company Name:
Name:
Title:
Address:
Phone:
Fax:
E-mail:

For Technical Matters:
Company Name:
Name:
Title:
Address:
Phone:
Fax:
E-mail:

7. INTELLECTUAL PROPERTY/ CONFIDENTIALITY. a. Except as otherwise provided herein, all Intellectual Property Rights matters shall be governed by the MNX Policies

& Procedures attached hereto as Appendix A. In addition, any Intellectual Property Rights matters which may arise under individual Work Orders shall be governed by the MNX Policies & Procedures in effect on the effective date of such Work Orders and posted on the MNX Internet site. Any inconsistencies between the two shall be governed by the MNX Policies & Procedures in effect on the date of the relevant Work Order(s).

b. Except as otherwise provided in a separate written agreement, each Party agrees to use its best efforts to protect the confidential and/or proprietary information ("Confidential/ Proprietary Information") of other Parties to an extent commensurate with its protection of its own Confidential/ Proprietary Information, and in no event less than a reasonable level of protection. The Parties agree to clearly mark as "Confidential/Proprietary Information" any information deemed confidential and/or proprietary, and will use best efforts not to mark as confidential and/or proprietary information known not to be confidential and/or proprietary. Unless otherwise provided in a separate written agreement, Fab Site authorizes CNRI to disclose Fab Site's Confidential/ Proprietary Information as necessary for the development or performance of Customers' Work Request(s) or Work Order(s). CNRI will take reasonable steps to establish a dependable MNX. However, the Parties acknowledge that the MNX Processes will be provided in an Internet environment that will not be secure.

c. Fab Site agrees to designate specific individuals who will have responsibility for reviewing Work Requests. These individuals may be required to enter into a non-disclosure agreement with CNRI.

8. LIMITATION OF LIABILITY. a. Fabrication Site agrees to indemnify and hold harmless CNRI, its officers, employees, and agents, from and against any and all liabilities, damages, claims, or expenses (including reasonable attorneys' fees), whether directly or by way of contribution or indemnity, for any claim made by any person or other entity, including claims for personal injury or death, or for property damage or loss, arising in any way in connection with the fabrication services provided by Fab Site for MNX Customers.

Fabrication Site agrees to indemnify and hold harmless CNRI, its officers, employees and agents for any and all infringement of Intellectual Property Rights which may arise in connection with any fabrication services carried out by Fab Site, unless CNRI's own actions directly cause the alleged infringing activity. The provisions of this clause shall survive the termination of this Agreement.

b. Fab Site hereby agrees to indemnify and hold harmless CNRI, its employees, and instrumentalities from and against any and all liability, cost, claims, fines, penalties, and suits of any kind for injury to or death of any person, and for loss of or damage to any property, including natural resources, occurring in connection with, or in any way incident to the release of any contaminate by Fab Site, or any noncompliance by Fab Site with any Federal, State or local environmental laws or regulations, unless directly caused by CNRI's own activities. This responsibility to indemnify and hold harmless CNRI shall exist even if the release or noncompliance is discovered after the date this Agreement expires.

c. NEITHER PARTY MAKES ANY REPRESENTATIONS OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, AS TO ANY MATTER WHATSOEVER, INCLUDING BUT NOT LIMITED TO THE SERVICES OR INFORMATION FURNISHED BY EITHER PARTY TO THE OTHER PARTY OR BY EITHER PARTY TO THE END CUSTOMER. In no event shall CNRI, its officers, employees and agents be liable for expenses, damages, or other losses incurred by Fab Site as a result of delays, or for special or exemplary damages, or lost profits arising from its obligations hereunder. Oral statements, if any, made by CNRI's employees and agents do not constitute warranties, shall not be relied upon as such by Fab Site, and are not part of this Agreement.

d. Unless otherwise agreed in a separate written agreement between the Parties, Fab Site hereby agrees that CNRI shall not be deemed a party to or otherwise subject to any obligation of Fab Site under any agreement entered into between Fab Site and any third party to this Agreement, including without limitation Customers of the MNX.

9. ENVIRONMENTAL COMPLIANCE AND RELEASES. Fab Site is solely responsible for achieving compliance with all environmental laws, including the preparation and submission of all licenses and permit applications required under Federal, State, or Local laws and regulations. Fab Site shall not name CNRI, the MNX, the United States Government, DARPA, or any other government instrumentality, or its employees, as an owner, operator, or in any other capacity on any license or permit application required under environmental laws unless written consent is first obtained from CNRI. Fab Site shall not accept issuance of any permit or license which purports to impose upon CNRI any obligation or liability for any operations or activities covered by such permit or license except upon prior written consent of CNRI.

10. EXPORT CONTROL. Customers may submit Work Orders to MNX that involve technology and devices controlled under the International Traffic in Arms Regulation, 22 C.F.R. Parts 120-130 (ITAR) or Export Administration Regulation(EAR) 15 C.F.R. Parts 730-774. Fab Site shall indicate by initialing the box where requested below whether it is willing to receive such Work Orders that would involve such export-controlled material and that it is able to safeguard export-controlled materials as required under the ITAR and EAR. If Fab Site indicates below that it is not willing to receive such Work Orders, Fab Site understands that MNX will not offer Fab Site a Work Order that involves export-controlled material. If Fab Site is willing to receive such Work Orders, Fab Site warrants that: (1) it will handle any Work Order designated as "ITAR-controlled" in accordance with the applicable ITAR requirements, will maintain registration with the U.S. Department of State as a manufacturer of defense articles if required, and will not employ any foreign persons (as defined in 22 C.F.R. § 120.16) in the performance of any such Work Order, except as authorized under the ITAR, and, (2) it will handle any Work Order designated as "EAR-controlled" in accordance with applicable EAR requirements and will not employ any foreign persons (as defined in 15 C.F.R § 772.1) in the performance of any such Work Order, except as authorized under the EAR.

11. DISPUTE RESOLUTION. a. Any controversy or claim arising out of or relating to this Agreement, its execution or breach, and any damages allegedly suffered therefrom, shall be submitted to friendly negotiation between the Parties prior to pursuing judicial remedies. To facilitate the amicable resolution of any controversy or claim, the aggrieved Party shall document the dispute or misunderstanding by promptly notifying the other Party in writing of the relevant facts, unresolved issues, and the clarification or remedy sought. The other Party shall submit a written position on the matter(s) in dispute within thirty (30) calendar days after being notified of the controversy or claim.

b. This Agreement, as well as any disputes brought under this Agreement, shall be interpreted and governed in all respects by applicable Federal law, and the law of the Commonwealth of Virginia, USA, excluding Virginia conflicts of law provisions.

c. If any article, clause, provision, or section of this Agreement should be held illegal or invalid by any court, the invalidity of such article, clause, provision, or section shall not affect any of the remaining articles, clauses, provisions or sections hereof, and this Agreement shall be construed and enforced as if such illegal or invalid article, provision, or section had not been contained herein, unless separately agreed upon in writing by the Parties.

12. MISCELLANEOUS ISSUES. a. Nothing in this Agreement shall be deemed to create any relationship of agency, partnership, or joint venture between the Parties. This Agreement, together with the MNX Policies & Procedures, constitute the entire agreement between the Parties with respect to the subject matter hereof, and supersedes all prior and contemporaneous agreements, whether oral or in writing, with respect to the subject matter hereof. This Agreement may not be amended, or any requirement herein waived, unless the amendment or waiver is made by a mutual agreement in writing and signed by CNRI and Fab Site.

b. All taxes based upon the gross or net income of Fab Site, and any other taxes, fees, business licenses, or permits of any kind which are required and/or assessed by any domestic or foreign government authority in connection with

Fab Site's performance under this Agreement, shall be solely the responsibility of and paid by Fab Site.

13. TERMINATION. Either CNRI or Fab Site may terminate this Agreement, at any time and without cause, by providing to the other Party written notice sixty (60) days in advance of the termination date. However, any approved Work Order received by Fab Site before termination notification is received by the other Party will be honored and completed, unless separately agreed in writing among the Parties.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement by their respective duly authorized representatives.

FOR CNRI:

By: _____
Signature Date

Dr. Robert E. Kahn
President & CEO

FOR FABRICATION SITE:

By: _____
Signature Date

Print Name and Title

E-Mail



My organization is willing to accept Work Orders for ITAR-controlled and EAR-controlled work, and is able to safeguard export-controlled materials as required under ITAR and EAR.

APPENDIX A: MNX POLICIES & PROCEDURES (March 5, 2010)

The MEMS and Nanotechnology Exchange® ("MNX") is a cooperative environment for use by Customers and Fabrication Sites, as established and administered by CNRI, for the development of technology facilitating the design, microfabrication, processing, packaging, and testing of MEMS and nanotechnology devices. As an open environment, the MEMS and Nanotechnology Exchange seeks to provide Customers with greater access to MEMS and nanotechnology fabrication capabilities.

Part A

MNX PROCEDURES

1. On the MEMS and Nanotechnology Exchange® ("MNX") Internet Site: www.MEMS-Exchange.org, the MNX provides business forms necessary to open a Business Account and provides MEMS and Nanotechnology fabrication information necessary to submit a Work Request. The business forms include a Customer Agreement and an Account Application. Unless indicated otherwise, all notices and correspondence should be sent to the MEMS and Nanotechnology Exchange via e-mail to business@MEMS-Exchange.org. Facsimiles should be sent to (703) 262-5367, and telephone inquiries should be made at (703) 262-5368.

2. The procedures for accessing services available through the MEMS and Nanotechnology Exchange include the following steps:

- **Business Account.** For the MNX to proceed with Customer's Work Request, the Customer must submit an Account Application to establish a Business Account, and submit a Customer Agreement to the MNX.
- **Work Request.** Customer will transmit a Work Request including its desired selection of processing services to the MNX. The Work Request includes the requested processing services, subject to the terms of the Customer Agreement.
- **Process Runcard.** The MNX will review Customer's Work Request and generate a Process Runcard, which encompasses all of the detailed technical requirements for the Work Request to be completed, and process specific terms and conditions, and will obtain acceptance of the Process Runcard from the applicable Fabrication Site(s). The Process Runcard will show a price which includes shipping, wafers, equipment time, staff time, etc.
- **Customer Review of the Process Runcard.** Customer must carefully review the Process Runcard for errors, omissions, specific requests or requirements, specific instructions, and general comments. If questions arise, the MNX will facilitate possible modifications in order to meet Customer's process requirements. If modifications are made, the MNX will send a revised Process Runcard to the Customer.
- **Work Order.** A Process Runcard will become a Work Order effective on the date Customer accepts the terms of the Work Order Approval Agreement.
- **Payment.** A means of payment (typically a purchase order or credit card number) must be submitted to the MNX in order for processing to begin. Payment is due upon receipt of invoice from MNX as follows: (i) For each Work Order above \$10,000, a payment of 50% of the Total Price of the Work Order will be required prior to the performance of any fabrication work; and MNX will invoice Customer in this amount before work begins. The balance of the Total Price of the Work Order will be invoiced periodically as work is performed. (ii) For each Work Order below \$10,000, the MNX will invoice Customer periodically as costs are incurred, at the discretion of the MNX. Payment is due upon receipt of invoice. No terms and conditions in Customer's purchase order or other payment-related document will be considered additional terms and conditions applicable to the Work Order

Approval Agreement unless signed in writing by both parties as incorporated therein.

3. In the event that a Fabrication Site refuses to process a Work Order, the MEMS and Nanotechnology Exchange will provide Customer with an explanation of such refusal and will consult with Customer to revise the Work Order and resubmit the revised version to the Fabrication site. If approval by Fabrication Site of the resubmission is not reached, MNX will consult with Customer and attempt to find alternative processing options to meet Customer's request. If MNX cannot find alternative processing options, the Work Order will terminate. MNX shall not be liable for any costs or damages incurred by Customer resulting from a Fabrication Site's refusal to perform a Work Order

4. Customer is responsible for adequately packaging and arranging the transportation of process materials (e.g., wafers, masks, and other information and material required for performance of a Work Order) to the initial location as instructed by the MNX. Customer must inform the MNX of the transportation arrangements, or may alternatively use transportation services arranged by the MNX. The MNX will arrange transportation of process materials between Fabrication Site(s), and will only deliver to locations in the United States unless approved by MNX in advance in writing. Each Fabrication Site is responsible for adequately packaging process materials for transportation from its facility after processing. Customer is responsible, at Customer's own discretion, for obtaining sufficient insurance to fully cover any loss for all transportation required, both to and from Customer, and between the Fabrication Site(s). The liability for transportation-related loss of process materials shall be limited to the insurance obtained by Customer. Customer is also responsible for obtaining any U.S. government authorization and making any submissions required for any subsequent export of the process materials, unless otherwise agreed in writing by the parties.

Part B

MNX INTELLECTUAL PROPERTY POLICY

1. Introduction

Intellectual Property (IP) shall refer to any inventions, creations, improvements, technical data, mask works, works of authorship, microfabrication processes and/or process sequences, designs, or other developments including software and improvements thereto, whether patentable, copyrightable, or not. The MEMS and Nanotechnology Exchange ("MNX") strives to effectively diminish IP barriers to the use of the MNX as a trusted intermediary in fabricating MEMS and nanotechnology devices. CNRI may periodically update the IP Policy, and will post such updates on the MEMS and Nanotechnology Exchange Internet Site. In consideration of its participation in the MNX, each party will comply with the following IP provisions:

2. Intellectual Property Ownership

a. Customer, Fabrication Site, and CNRI shall each retain ownership of its respective existing IP. Customer, Fabrication Site, and CNRI, respectively, shall each retain ownership of new IP developed solely by that party. Collaborating parties shall jointly own new IP developed through such collaboration, in accordance with applicable law or with any separate agreement entered into by the applicable collaborating parties with respect to such new IP.

b. Customer shall grant to CNRI a non-transferable, non-exclusive, royalty-free license to use Customer's IP as necessary for the development or performance of its Work Request(s) or Work Order(s). Fabrication Site shall grant to CNRI a non-transferable, non-exclusive, royalty-free license to use Fabrication Site's IP as necessary for the development or performance of a Work Request(s) or Work Order(s) including Fabrication Site's process(es).

c. Notwithstanding the provisions herein, the parties are free to enter into separate IP agreements relating to MEMS and Nanotechnology Exchange activities which do not prejudice the rights of CNRI.

d. Except as provided herein, no party shall use the name, logo, registered or unregistered marks, or other identification of another party in connection with any

product, service, promotion, public announcement, or news release without the prior written consent of that other party. The parties acknowledge that CNRI claims all rights in and to the marks "MNX," "MEMS and Nanotechnology Exchange," and "MEMS EXCHANGE." While parties are encouraged to use the marks MEMS AND NANOTECHNOLOGY, MEMS EXCHANGE or MNX to indicate participation in the MNX, a party's use of the MEMS and Nanotechnology Exchange shall not create any rights in such party with respect to the MNX marks, and any and all rights arising from such use, if any, shall inure to the benefit of CNRI.

3. Third Party Infringement

- a. The parties represent that, to the best of their knowledge and belief, their activities related to the MNX do not infringe any IP rights of third parties.

- b. Customer and Fabrication Site agree to inform the MNX in writing of any claim by a third party of infringement relating to the activities of the MNX Exchange within ten (10) days, including the nature of such claim. Customer, Fabrication Site, and CNRI agree to cooperate in order to promptly resolve any such claim.