505703820 10/02/2019

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5750630

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-----------------|----------------|
| GARY GRIDER | 09/23/2019 |
| DAVID J. BONNIE | 09/27/2019 |

RECEIVING PARTY DATA

| Name: | TRIAD NATIONAL SECURITY, LLC |
|-----------------|------------------------------|
| Street Address: | P.O. BOX 1663 |
| City: | LOS ALAMOS |
| State/Country: | NEW MEXICO |
| Postal Code: | 87545 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14870968 |

CORRESPONDENCE DATA

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using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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| ATTORNEY DOCKET NUMBER: | EMC-15-0310 |
|-------------------------|------------------|
| NAME OF SUBMITTER: | JOSEPH B. RYAN |
| SIGNATURE: | /Joseph B. Ryan/ |
| DATE SIGNED: | 10/02/2019 |

Total Attachments: 3

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PATENT 505703820 REEL: 050604 FRAME: 0825

ASSIGNMENT

WHEREAS, we, Gary Grider, of Los Alamos, New Mexico, and, David J. Bonnie, of Los Alamos, New Mexico, have invented certain invention(s), as described at least in part, in the following patent application(s):

U.S. Patent Application No. 14/870,968, filed on 9/30/2015, entitled "METHOD AND SYSTEM FOR REDUCING METADATA OVERHEAD IN A TWO-TIER STORAGE ARCHITECTURE,"

which application(s) and invention(s) are collectively referred to as "the Invention."

WHEREAS, TRIAD National Security, LLC, a Delaware Limited Liability Company, located at the Los Alamos National Laboratory, LC/TAS, P.O. Box 1663, Los Alamos, New Mexico 87545, desires to acquire an interest therein:

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, we, Gary Grider and David J. Bonnie hereby sell, assign, and transfer to TRIAD National Security, LLC, all right, title, and interest we have in and to the Invention and patent rights throughout the world, including foreign patent priority rights, the right to file and prosecute International Applications under the Patent Cooperation Treaty, and the right to file and prosecute applications under the European Patent Convention; the Invention and letters patent in this or any foreign country, and all corresponding non-provisional applications, divisions, continuations, continuations-in-part, reissues, and extensions thereof, to be held and enjoyed by TRIAD National Security, LLC, for its own use and benefit, and for its successors and assigns to the full end of the term for which letters patent may be granted by the United States or any foreign country, as fully and entirely as the same would have been held by us had this assignment and sale not been made and agree that we will communicate to TRIAD National Security, LLC, or its successors and assigns, any facts known to us respecting the Invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, and reissue applications, make all rightful oaths, and do everything possible to aid TRIAD National Security, LLC, its successors, and assigns to obtain and enforce proper patent protection for the Invention in the United States or any foreign country.

We confirm that, at the time the Invention was made, we were under an obligation to assign the Invention to TRIAD National Security, LLC.

We hereby grant TRIAD National Security, LLC the power to insert on this Assignment any further information that may be necessary or desirable in order to comply with all applicable legal requirements, including the rules of the United States Patent and Trademark Office, for submitting and recording this document.

> PATENT REEL: 050604 FRAME: 0826

| Executed at the place and date belo | w our respective signatures below. | |
|-------------------------------------|-------------------------------------|---|
| | Land Land | |
| | Gary Grider | |
| | At Los Alamos, New Mexico | |
| | (City and State) | |
| | on this 23rd day of September, 2019 | • |
| | | |
| | | |
| | | |
| | David J. Bonnie | |
| | At | |
| | (City and State) | |
| | on this,,, | • |

PATENT REEL: 050604 FRAME: 0827 Executed at the place and date below our respective signatures below.

| (City and State) | | |
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PATENT REEL: 050604 FRAME: 0828

RECORDED: 10/02/2019