

## PATENT ASSIGNMENT COVER SHEET

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<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	LEONARD A. ATKINSON	09/12/2016
<b>RECEIVING PARTY DATA</b>		
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<b>Street Address:</b>	4700 NATHAN LANE	
<b>Internal Address:</b>	MN07-LW58	
<b>City:</b>	PLYMOUTH	
<b>State/Country:</b>	MINNESOTA	
<b>Postal Code:</b>	55442	
<b>PROPERTY NUMBERS Total: 1</b>		
	<b>Property Type</b>	<b>Number</b>
	Application Number:	15806081
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<b>Fax Number:</b>	(612)315-4321	
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<b>ATTORNEY DOCKET NUMBER:</b>	5052.0017US2	
<b>NAME OF SUBMITTER:</b>	JULIE ERICKSON	
<b>SIGNATURE:</b>	/Julie Erickson/	
<b>DATE SIGNED:</b>	06/04/2018	
<b>Total Attachments: 2</b>		
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ASSIGNMENT

WHEREAS, I, **Leonard A. Atkinson**, of 12227 Folkstone Drive, Oak Hill, VA 20171 ("Assignors"), have invented certain new and useful improvements in COMMUNICATIONS BANDWIDTH ENHANCEMENT USING ORTHOGONAL SPATIAL DIVISION MULTIPLEXING, for which an application for Letters Patent of the United States has been made, and which may be identified in the United States Patent Office by Application No. 14/642,225, filed March 9, 2015,


WHEREAS, **Orbital ATK, Inc.**, ("Assignee"), a business entity organized and existing under the laws of the State of Delaware, and having its principal offices at 4700 Nathan Lane, MN07-LW58, Plymouth, MN 55442 USA, is desirous of acquiring the entire right, title and interest in and to said invention, said application and in, to and under any and all Letters Patent to be obtained therefor,

NOW, THEREFORE, for and in consideration of good and valuable consideration paid by Assignee to Assignors, the receipt and sufficiency of which is hereby acknowledged by us, we have sold, assigned and transferred, and by these presents do hereby sell, assign and transfer unto the said Assignee, its successors and assigns, our entire right, title and interest in and to said invention, said application, all applications claiming priority to said application including all divisions, continuations or renewals thereof, and the Letters Patent, both foreign and domestic, that may or shall issue, therefrom including all reissues or extensions of such patents including all of our rights under the International Convention and further including the right to sue, counterclaim and recover for past, present and future infringement of the rights assigned or to be assigned, as fully and entirely as the same would have been held by the Assignors if this assignment had not been made, and we do hereby authorize and request the Commissioner of Patents to issue said Letters Patent to the above mentioned Assignee in accordance herewith.

We authorize said Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent, in its own name if desired, in any and all foreign countries, and additionally to claim the filing date of said United States application and/or otherwise take advantage of the provisions of the International Convention.

Upon said consideration we do hereby covenant and agree with the said Assignee, its successors and assigns, that we will not execute in writing or do any act whatsoever conflicting with these presents, and that we or our executors or administrators will at any time upon request, without further or additional consideration, but at the expense of the said Assignee, its successors and assigns, execute such additional writings and do such additional acts as said Assignee, its successors and assigns, may deem necessary or desirable to perfect the Assignee's enjoyment of this grant, and render all necessary assistance in making application for and obtaining original, divisional, reissued or extended Letters Patent of the United States, or of any and all foreign countries on said invention, and in enforcing any rights occurring as a result of such applications or patents, by giving testimony in any proceedings or transactions involving such applications or patents.

Date: 9/12/16  
Month/Day/Year

  
Leonard A. Atkinson

Subscribed to and sworn to before me  
this 12th day of September, 2016.

  
Notary Public

Notary Seal

