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| UPTON, Eric L. | Internal Address: Law Dept. | 96 |
| Additional name(s) of conveying party(ies) attached? | Bldg. E2/6072 | 116/ |
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| If this document is being filed together with a new application | | |
| A. Patent Application No.(s) | B. Patent No.(s) Solution Patent No.(s) Patent No.(s) | |
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| A. Patent Application No.(s) Additional numbers atta | 6. Total number of applications and patents involved: | |
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ASSIGNMENT

For valuable consideration, the adequacy and receipt of which are hereby acknowledged, we Michael G. Wickham and Eric L. Upton respectively, of Rancho Palos Verdes, California and Redondo Beach, California do hereby sell and assign to TRW Inc., One Space Park, Redondo Beach, California, an Ohio corporation, its successors and assigns, the entire right, title and interest in and to the improvements in AN OPTICAL ENERGY TRANSMISSION SYSTEM UTILIZING PRECISE PHASE AND AMPLITUDE CONTROL which has been invented by us, as described in the application for United

and any and all applications for patent and patents therefore in any and all countries, including all divisions, reissues, continuations, and extensions thereof, and the right to claim the priority date of the first filed application in the United States, and authorize and request any official whose duty it is to issue patents, to issue any patent on said improvements or resulting therefrom to said TRW Inc., or its successors or assigns, and agree that on request and without further consideration, but at the expense of TRW Inc., we will communicate to TRW Inc. or its representatives or nominees any facts known to us respecting said improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, and reissue applications, make all rightful oaths, and generally do everything possible to aid TRW Inc., its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

12-15 , 1999 Inventor: Muchael

12-15 , 1999 Inventor: Circ Eric L.

PATENT **REEL: 010472 FRAME: 0039**

| STATE OF CALIFORNIA) |
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| COUNTY OF LOS ANGELES) |
| on becember 15,1999 before me, Lorna L. Schott personally appeared Michael G. Wickham |
| nergonally appeared Michael G Wickham |
| personally known to me -or- proved to me on the basis of |
| satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me the he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. |
| LORNA L. SCHOTT Commission # 1236694 Notary Public - California Los Angeles County My Comm. Expires Oct 27, 2003 WITNESS my hand and official seal. |
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| STATE OF CALIFORNIA) COUNTY OF LOS ANGELES On December 5 999 before me, Lorna L. Schott personally appeared Eric L. Upton |
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