



## STARMESH GLOBAL™ WORLDWIDE PATENT PORTFOLIO OVERVIEW

PATENT NO./APPL. NO.	COUNTRY	PAT. ISSUE / APPL. FILING DATE	PRIORITY DATE	STATUS
<b>A: RADIO SYSTEM USING SATELLITES</b>				
<b>("BENT PIPE")</b>				
Pat. No. 10,084,536	United States	9/25/18	8/25/16	In force - expires 7/21/37
Pat. No. 10,998,962	United States	5/4/21	8/25/16	In force - expires 7/21/37
App. No. 17/214,821	United States	3/27/21	8/25/16	Pending (Pub. No. US 2021/0344412)
<b>FAMILY B: RADIO SYSTEM USING NODES</b>				
<b>("ROTATING SATELLITES")</b>				
Pat. No. 10,447,381	United States	10/15/19	8/25/16	In force - expires 8/23/37
Pat. No. 11,038,586	United States	6/15/21	8/25/16	In force - expires 8/23/37
App. No. 17/317,310	United States	3/27/21	8/25/16	Pending (Pub. No. US 2021/0399793)
<b>Foreign Patents &amp; Applications</b>				
Pat. No. ZL 2017800519208	China	11/24/20	8/25/16	In force - expires 8/23/37
Pat. No. ZL 2020112170244	China	7/21/22	8/25/16	In force - expires 8/23/37
Pat. No. HK40006930	Hong Kong	8/20/21	8/25/16	In force - expires 8/23/37
Pat. No. EP3504808	European PO	7/27/22	8/25/16	In force - expires 8/23/37
App. No. 201927009397	India	3/11/19	8/25/16	Pending
Pat. No. 264883	Israel	5/28/20	8/25/16	In force - expires 8/23/37
App. No. 2019-507247	Japan	2/5/19	8/25/16	Pending
Pat. No. 370247	Mexico	12/5/19	8/25/16	In force - expires 8/23/37
Pat. No. RP:NG/PT/2018/2945	Nigeria	11/19/18	8/25/16	In force - expires 8/23/37
App. No. 1-2019-550023	Philippines	2/8/19	8/25/16	Pending
App. No. 10202102036V	Singapore	2/27/21	8/25/16	Pending
Pat. No. 2019/00468	South Africa	9/25/19	8/25/16	In force - expires 8/23/37
<b>FAMILY C: RADIO SYSTEM USING NODES WITH HIGH GAIN ANTENNAS</b>				
<b>("STAR ANTENNA")</b>				
Pat. No. 10,085,200	United States	9/25/18	9/29/17	In force - expires 9/29/37
Pat. No. 10,791,493	United States	9/29/20	9/29/17	In force - expires 9/29/37
Pat. No. 11,356,921	United States	6/7/22	9/29/17	In force - expires 9/29/37
App. No. 17/752,912	United States	5/25/22	9/29/17	Pending (Pub. No. US 2022/0408339)
<b>Foreign Applications</b>				
App. No. 2018341561	Australia	4/15/20	9/29/17	Pending
App. No. 3076010	Canada	3/16/20	9/29/17	Pending
Pat. No. ZL 2018800627936	China	6/17/22	9/29/17	In force - expires 9/27/38
App. No. ZL 2022106613390	China	6/13/22	9/29/17	Pending
App. No. 62020022409.0	Hong Kong	12/8/20	9/29/17	Pending
App. No. 18 860 787.3-1215	European PO	4/3/20	9/29/17	Pending
App. No. 202027017798	India	4/26/20	9/29/17	Pending
App. No. 2020-516855	Japan	3/23/20	9/29/17	Allowed
App. No. 2023-027389	Japan	2/24/23	9/29/17	Pending
App. No. 10-2020-7012073	South Korea	4/24/20	9/29/17	Allowed
App. No. MX/a/2020/003736	Mexico	4/16/20	9/29/17	Pending
App. No. NG/PT/C/2020/4428	Nigeria	3/20/20	9/29/17	Pending
App. No. 1-2020-550083	Philippines	3/13/20	9/29/17	Pending
Pat. No. 11202002249R	Singapore	10/19/22	9/29/17	In force - expires 9/27/38
App. No. 102022509250Q	Singapore	9/6/22	9/6/22	Pending



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<b>FAMILY D: DATA TRANSMISSION SYSTEMS AND METHODS USING SATELLITE-TO-SATELLITE RADIO LINKS</b>				
<b>("ROUTES BY ORBITAL KNOWLEDGE")</b>				
Pat. No. 10,291,316	United States	5/14/19	12/11/17	In force – expires 7/13/38
Pat. No. 10,784,953	United States	9/22/20	12/11/17	In force – expires 7/13/38
Pat. No. 11,206,079	United States	12/21/21	12/11/17	In force – expires 7/13/38
App. No. 17/540,470	United States	12/2/21	12/11/17	Pending (Pub. No. US 2021/0231758)
App. No. 3083425	Canada	12/5/20	12/11/17	Pending
App. No. 2018800854658	China	7/3/20	12/11/17	Pending
App. No. 62021024812.1	Hong Kong	2/3/21	12/11/17	Pending
App. No. NC2020/0008363	Colombia	7/7/20	12/11/17	Pending
App. No. 18 888 292.2-1205	European PO	12/5/20	12/11/17	Pending
App. No. 202027029277	India	7/9/20	12/11/17	Pending
App. No. 2020-529759	Japan	6/1/20	12/11/17	Pending
App. No. 10-2020-7019847	South Korea	7/9/20	12/11/17	Pending
App. No. MX/a/2020/005990	Mexico	6/8/20	12/11/17	Pending
App. No. NC/PT/C/2020/4632	Nigeria	6/10/20	12/11/17	Pending
App. No. 1-2020-550668	Philippines	5/20/20	12/11/17	Pending
App. No. 11202004637S	Singapore	5/19/20	12/11/17	Pending
<b>FAMILY E: COMMUNICATIONS SYSTEMS AND METHODS WITH STOCHASTICALLY DISTRIBUTED ORBITING SATELLITES</b>				
<b>("ROUTING ALGORITHMS FOR SATELLITE COMMUNICATIONS")</b>				
Pat. No. 10,979,136	United States	4/13/21	7/12/18	In force – expires 7/11/39
App. No. 17/203,789	United States	3/17/21	7/12/18	Pending (Pub. No. US 2021/0344409)
<b>Foreign Applications</b>				
App. No. 2019301682	Australia	12/22/20	7/12/18	Pending
App. No. 3104677	Canada	12/21/20	7/12/18	Pending
App. No. 2019800553138	China	2/22/21	7/12/18	Allowed
App. No. 19 834 930.0-1205	European PO	2/12/21	7/12/18	Pending
App. No. 62021042678.4	Hong Kong	11/18/21	7/12/18	Pending
App. No. 202027029277	India	2/11/21	7/12/18	Pending
App. No. 279844	Israel	12/29/20	7/12/18	Pending
App. No. 2020-529759	Japan	1/4/21	7/12/18	Pending
App. No. 10-2021-7004339	South Korea	2/11/21	7/12/18	Pending
App. No. MX/a/2021/000301	Mexico	1/11/21	7/12/18	Pending
App. No. NC/PT/C/2021/5140	Nigeria	1/1/21	7/12/18	Pending
App. No. 1-2021-550110	Philippines	1/12/21	7/12/18	Pending
App. No. 11202012897W	Singapore	12/22/20	7/12/18	Pending
App. No. 2021/00600	South Africa	1/27/21	7/12/18	Pending
App. No. 2023/04094	South Africa	4/3/23	7/12/18	Pending
App. No. 1-2021-00751	Vietnam	2/9/21	7/12/18	Pending
<b>FAMILY F: DATA TRANSMISSION SYSTEMS AND METHODS FOR LOW EARTH ORBIT SATELLITE COMMUNICATIONS</b>				
<b>("DATA TRANSMISSION DIVERSITY")</b>				
App. No. 17/322,950	United States	5/18/21	5/18/20	Pending (Pub. No. US 2021/0359751)



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<b>FAMILY G: DATA TRANSMISSION SYSTEMS AND METHODS FOR LOW AND VERY LOW EARTH ORBIT SATELLITES</b>				
<b>("AERODYNAMIC LEO AND VLEO SATELLITES")</b>				
App. No. 17/367,663	United States	7/6/21	7/10/20	Pending (Pub. No. US 2022/0029699)
<b>Foreign Applications</b>				
App. No. BR112022026213-2	Brazil	12/21/22	7/10/20	Pending
App. No. 3187423	Canada	12/15/22	7/10/20	Pending
App. No. 2021800486982	China	1/6/23	7/10/20	Pending
App No. 21838154.9	European PO	2/6/23	7/10/20	Pending
App. No. 202317007372	India	2/6/23	7/10/20	Pending
App. No. NG/PT/PCT/2023/6828	Nigeria	1/4/23	7/10/20	Pending
<b>FAMILY H: SATELLITE MESH SYSTEMS AND METHODS FOR CREATING RADIO ROUTES BETWEEN MOVING USERS</b>				
<b>("CONNECTING MOVING USERS VIA SATELLITES")</b>				
App. No. 17/539,236	United States	12/1/21	12/2/20	Pending (Pub. No. US 2022/0173795)
<b>FAMILY I: SYSTEMS AND METHODS FOR CREATING RADIO ROUTES AND TRANSMITTING DATA VIA ORBITING AND NON-ORBITING NODES</b>				
<b>("WORLDWIDE COMMUNICATIONS USING DRONES AND SATELLITES")</b>				
App. No. 17/539,240	United States	12/1/21	12/2/20	Pending (Pub. No. US 2022/0173796)