

Tension Member Monitoring & Logging



WOODS HOLE
OCEANOGRAPHIC
INSTITUTION

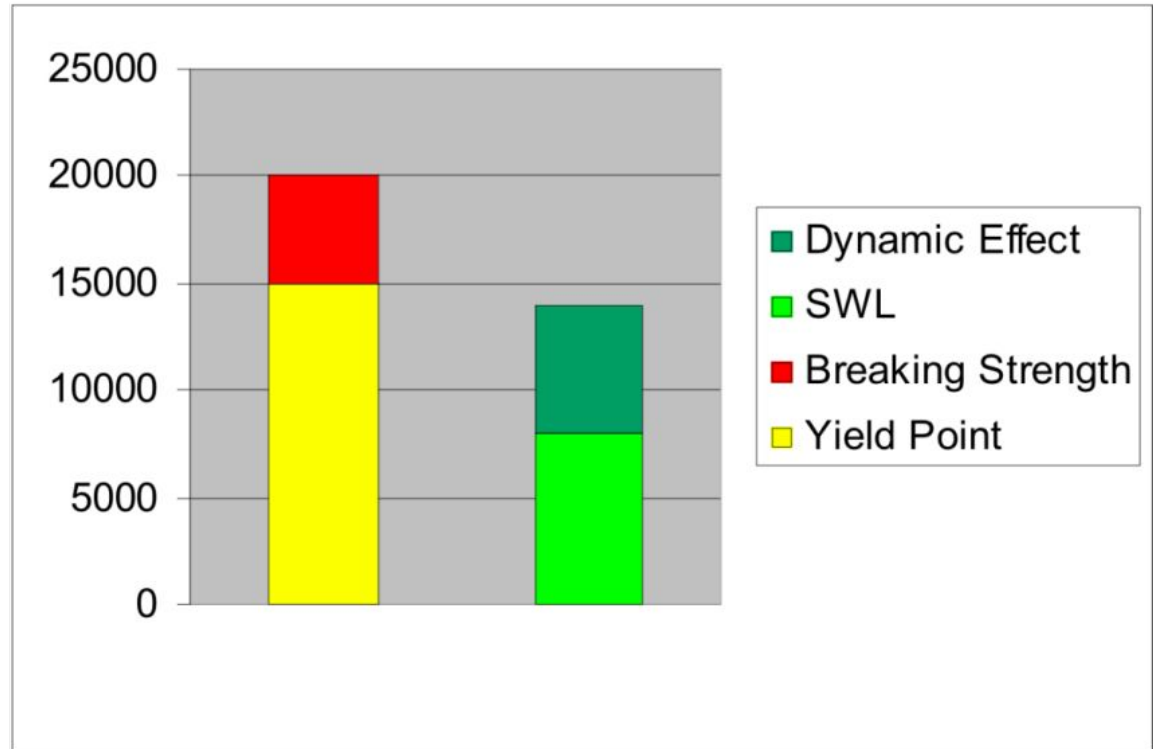


Introduction

Why are we here?

Justification

“When using low FS in oceanographic research, the capabilities of the tension member monitoring system become critical with respect to capturing and displaying dynamic loads. This standard is divided into three primary sections (Tables 6.1 – 6.4) because of this; with each section having increasingly stringent requirements for the monitoring system. If the monitoring system is not capable of reliably capturing peak (or low) dynamic loads, then the chosen FS must keep the tension member below its yield point.”

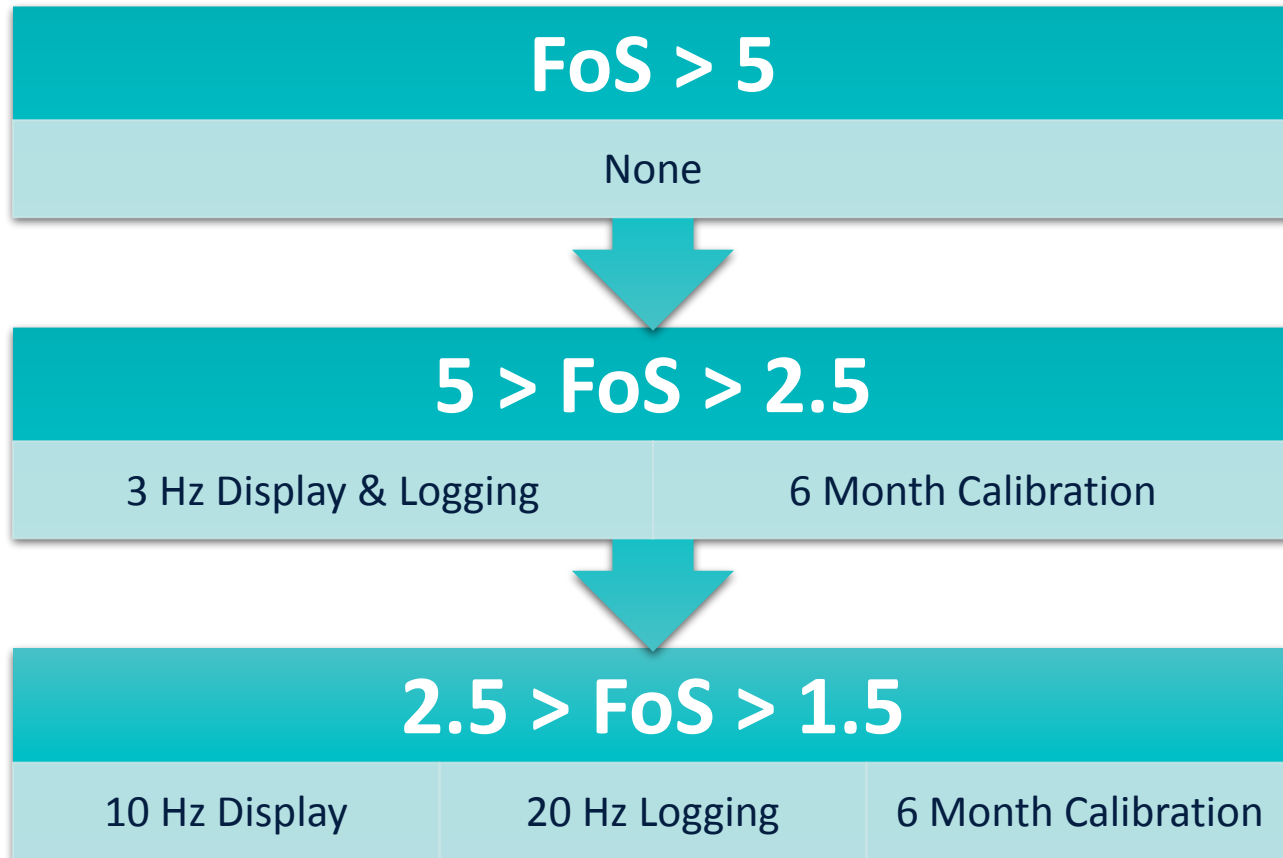




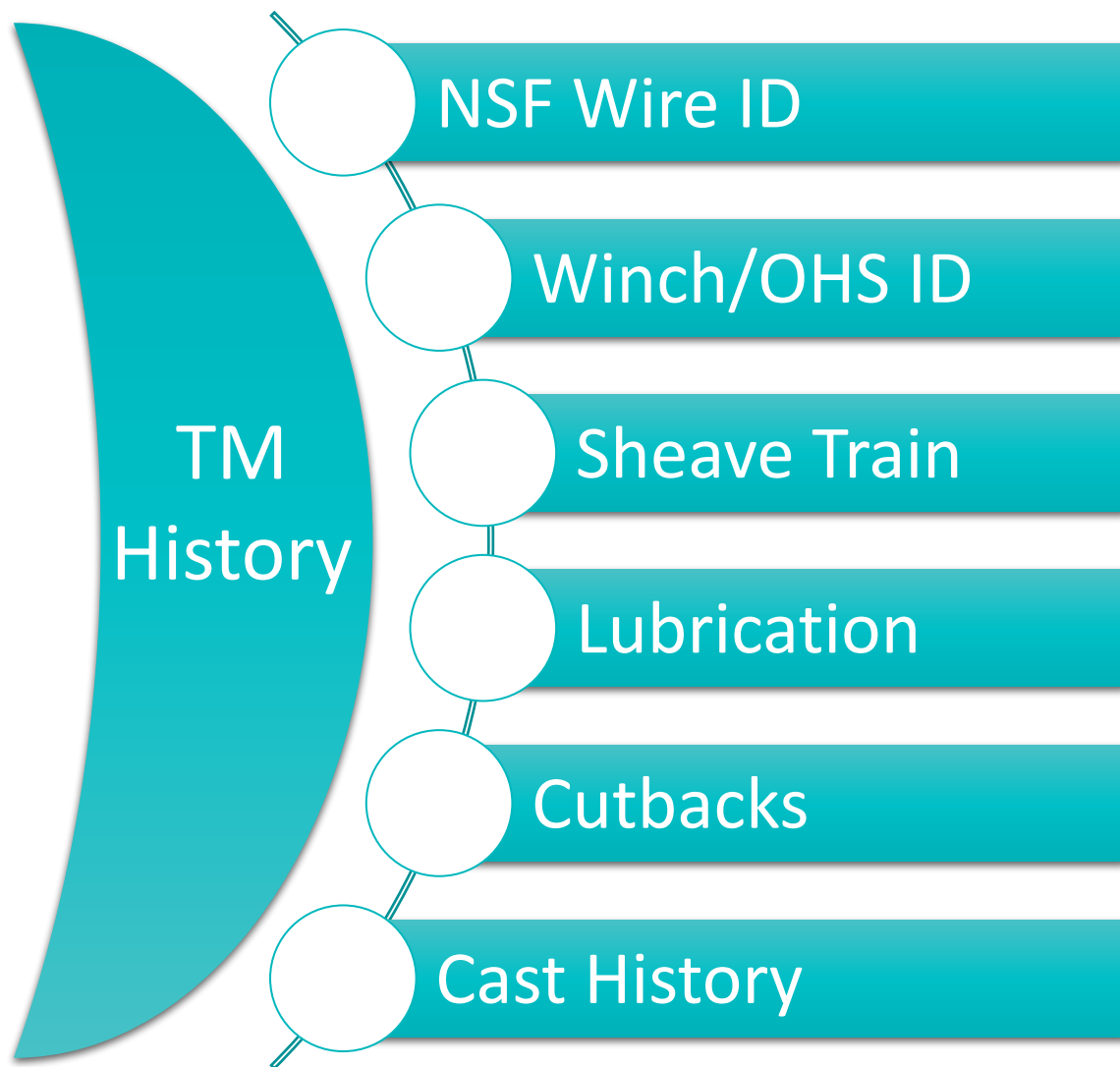
Monitoring and Logging Requirements

Not more Appendix A stuff

Monitoring Requirements



UNOLS Wire Pool Wire Log

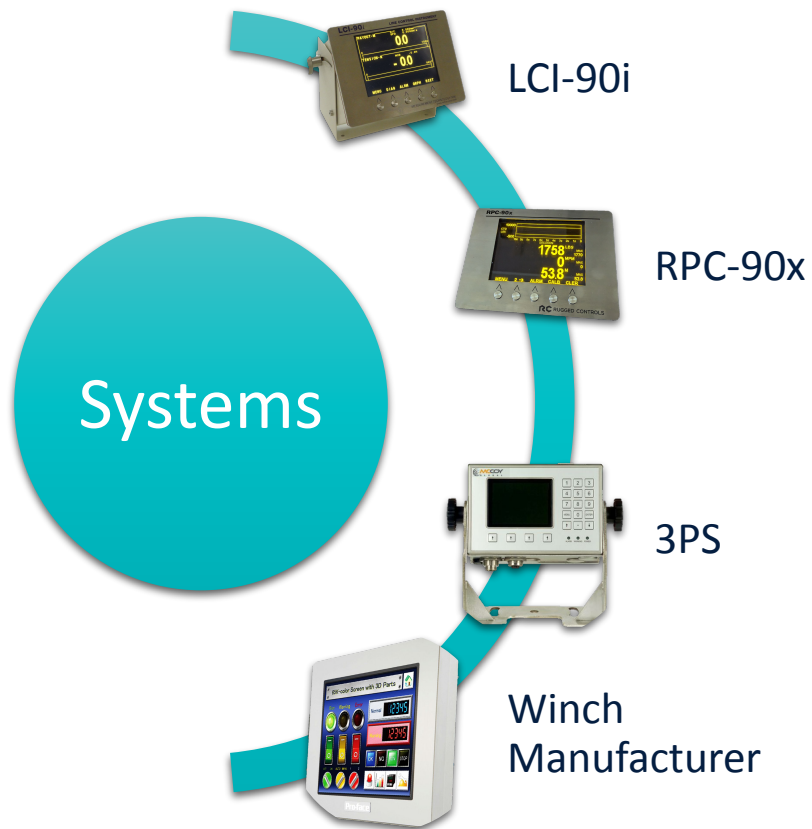




Monitoring Systems

Hardware

Fleet Equipment

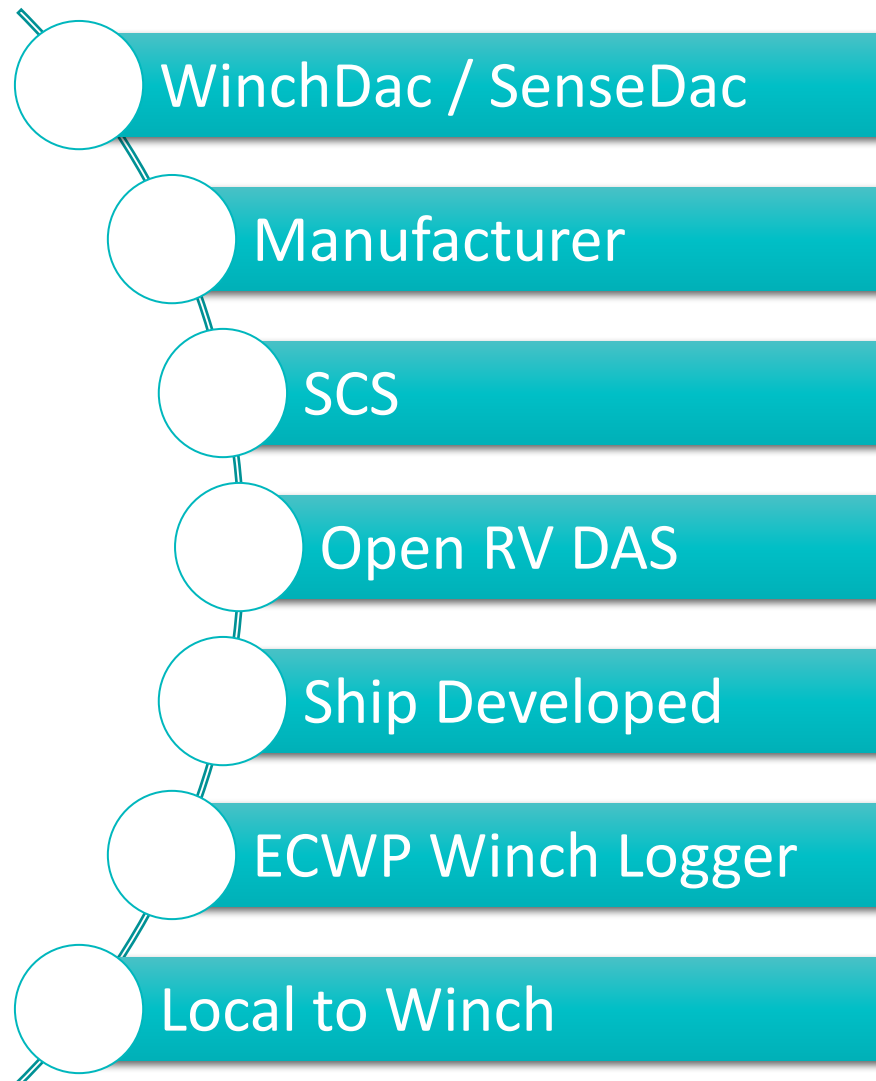




Logging Systems

Software

Fleet Logging Systems

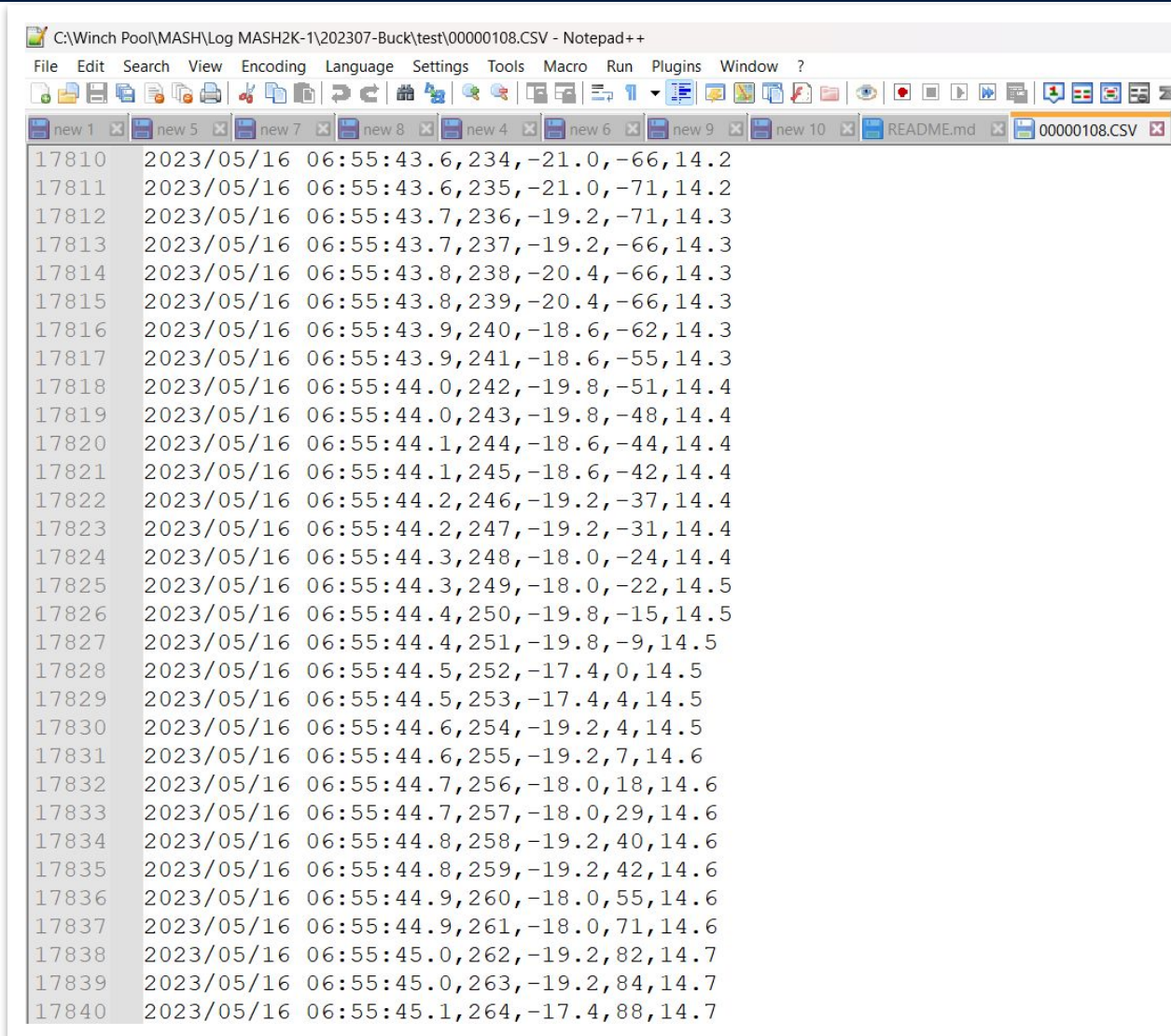




Log File

What data do we care about?

Raw Log File



The screenshot shows a Notepad++ window with the following title bar: C:\Winch Pool\MASH\Log MASH2K-1\202307-Buck\test\00000108.CSV - Notepad++. The window contains a list of 20 lines of data, each with a line number (17810-17840) and a series of comma-separated values representing time, location, and other parameters.

Line Number	Date	Time	X	Y	Z	Other
17810	2023/05/16	06:55:43.6	234	-21.0	-66	14.2
17811	2023/05/16	06:55:43.6	235	-21.0	-71	14.2
17812	2023/05/16	06:55:43.7	236	-19.2	-71	14.3
17813	2023/05/16	06:55:43.7	237	-19.2	-66	14.3
17814	2023/05/16	06:55:43.8	238	-20.4	-66	14.3
17815	2023/05/16	06:55:43.8	239	-20.4	-66	14.3
17816	2023/05/16	06:55:43.9	240	-18.6	-62	14.3
17817	2023/05/16	06:55:43.9	241	-18.6	-55	14.3
17818	2023/05/16	06:55:44.0	242	-19.8	-51	14.4
17819	2023/05/16	06:55:44.0	243	-19.8	-48	14.4
17820	2023/05/16	06:55:44.1	244	-18.6	-44	14.4
17821	2023/05/16	06:55:44.1	245	-18.6	-42	14.4
17822	2023/05/16	06:55:44.2	246	-19.2	-37	14.4
17823	2023/05/16	06:55:44.2	247	-19.2	-31	14.4
17824	2023/05/16	06:55:44.3	248	-18.0	-24	14.4
17825	2023/05/16	06:55:44.3	249	-18.0	-22	14.5
17826	2023/05/16	06:55:44.4	250	-19.8	-15	14.5
17827	2023/05/16	06:55:44.4	251	-19.8	-9	14.5
17828	2023/05/16	06:55:44.5	252	-17.4	0	14.5
17829	2023/05/16	06:55:44.5	253	-17.4	4	14.5
17830	2023/05/16	06:55:44.6	254	-19.2	4	14.5
17831	2023/05/16	06:55:44.6	255	-19.2	7	14.6
17832	2023/05/16	06:55:44.7	256	-18.0	18	14.6
17833	2023/05/16	06:55:44.7	257	-18.0	29	14.6
17834	2023/05/16	06:55:44.8	258	-19.2	40	14.6
17835	2023/05/16	06:55:44.8	259	-19.2	42	14.6
17836	2023/05/16	06:55:44.9	260	-18.0	55	14.6
17837	2023/05/16	06:55:44.9	261	-18.0	71	14.6
17838	2023/05/16	06:55:45.0	262	-19.2	82	14.7
17839	2023/05/16	06:55:45.0	263	-19.2	84	14.7
17840	2023/05/16	06:55:45.1	264	-17.4	88	14.7

UNOLS Wire Pool Log File

UNOLS Wire Log
 Tension Member NSF ID NSF-13-AB01-B Winch Name Larry
 Tension Member Part Number 5/16 Amsteel Blue Winch Model Mash2K
 Tension Member Manufacturer Samson Winch Manufacturer MacArtney
 Ship Sikuliaq Serial Number MASH2K-2

Event Type	Cruise #	Date	Cast #	Cable	Maximum Length (m)	Tension (lbf)	MT Wire Out (m)	MT Wire In (m)	Max Wire Out (m)	Notes
Installation		2024/04/05		1917						Installed Wire Pool 5/16 Amsteel Blue
Cast	Aguilar-Islas	2024/04/25	1	1917	560	32.299999	1884.7	122		
Cast	Aguilar-Islas	2024/04/26	2	1917	527	71.699997	1845.3	83.099998		
Cast	Aguilar-Islas	2024/04/27	3	1917	1411	142.7	1774.3	760		
Cast	Aguilar-Islas	2024/04/27	4	1917	641	23.799999	1893.2	34.900002		
Cast	Aguilar-Islas	2024/04/27	5	1917	2008	629.09998	1287.9	1500.2		Tension Alarm
Cast	Aguilar-Islas	2024/04/29	6	1917	749	637	1280	650		
Cast	Aguilar-Islas	2024/04/29	7	1917	586	13	1904	35.099998		
Cast	Aguilar-Islas	2024/04/29	8	1917	941	984.5	932.5	1500		
Cast	Aguilar-Islas	2024/04/30	9	1917	566	39.700001	1877.3	92		
Cast	Aguilar-Islas	2024/04/30	10	1917	637	27.5	1889.5	116		
Cast	Aguilar-Islas	2024/05/02	11	1917	591	466.39999	1450.6	727		
Cast	Aguilar-Islas	2024/05/04	12	1917	961	188.2	1728.8	270		
Cast	Aguilar-Islas	2024/05/04	13	1917	802	149.89999	1767.1	209		
Cast	Aguilar-Islas	2024/05/05	14	1917	736	76.800003	1840.2	170		
Cast	Aguilar-Islas	2024/05/05	15	1917	827	232.89999	1684.1	245		



RPC-90x

Issue Status

Reported Issues

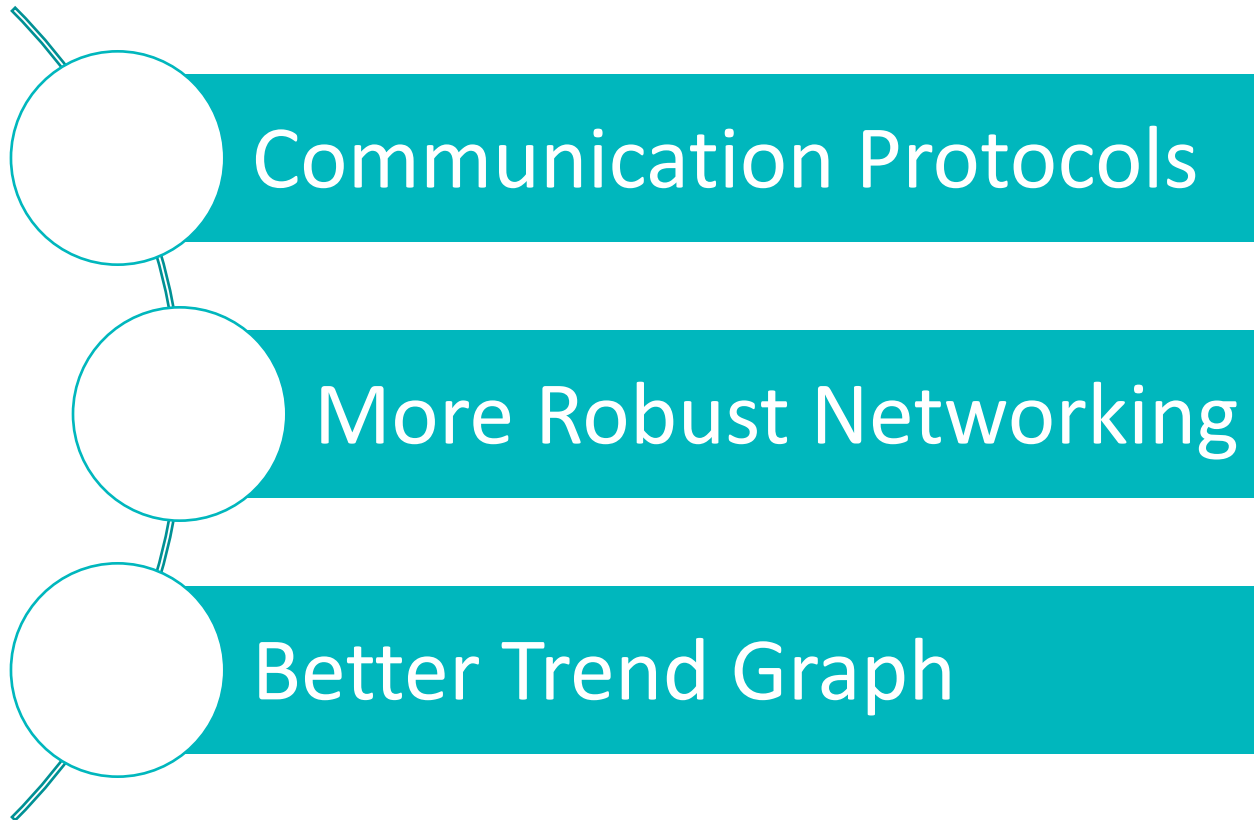


Root Causes

Firmware

Hardware Revisions

New Features



Questions? Demonstrations



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