Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Reliability and Continuity of	)	**PS Docket No. 11-60**
Communications Networks, Including	)	
Broadband Technologies	)	
	)	
Effects on Broadband Communications	)	**PS Docket No. 10-92**
Networks of Damage or Failure of	)	
Network Equipment or Severe Overload	)	
	)	
Independent Panel Reviewing the Impact	)	**EB Docket No. 06-119**
of Hurricane Katrina on Communications	)	
Networks	)	
	)	
	)	
	)	
	)	

To the Commission:

Additional Comments from Nickolaus E. Leggett

I am a certified electronics technician (ISCET and iNARTE) and an Extra Class amateur radio operator (call sign N3NL). I hold an FCC General Radiotelephone Operator License with a Ship Radar Endorsement. I am an inventor holding three U.S. Patents. My latest patent is a wireless bus for digital devices and computers (U.S. Patent # 6,771,935). I have a Master of Arts degree in Political Science from the Johns Hopkins University.

I am one of the original petitioners for the establishment of the Low Power FM (LPFM) radio broadcasting service (RM-9208 July 7, 1997 subsequently included in MM Docket 99-25). I am also one of the petitioners in the docket to establish a low power radio service on the AM broadcast band (RM-11287).

Additional Comments

This is my second set of comments in this Notice of Inquiry (NOI). My initial comments were submitted to the Commission on April 8, 2011. Those comments summarized some of my comments submitted in the previous dockets.

Use of the Inputs from Dockets 10-92 and 06-119

The Commission needs to make full constructive use of all of the input comments submitted previously in Dockets 10-92 and 06-119. All of the parties commenting in these dockets expended time and some money to develop their comments on emergencies and communications reliability. The Commission needs to keep faith with these efforts by including them in this proceeding.

Standards for Electromagnetic Pulse and Solar Storm Events

The current industrial standards do not effectively address protecting hardware from damage caused by electromagnetic pulse (EMP) attacks and/or naturally occurring solar storm events. This is because these two major threats are outside of the normal scope of planning conducted by industry. Industry plans for immediate and short term events and industry expects that both EMP and solar storms are long term events (if ever).

One would expect that government would have a more long term and comprehensive view that would include both EMP attacks and solar storm events. This has generally not occurred outside of the military. However, there have been some worthwhile studies of these threats. Some of these are listed in the notes at the end of this comment document. Mr. Donald Schellhardt and I have tried several times over the last 25 years to stimulate Commission interest in electromagnetic pulse, but there has been no

constructive action by the Commission on this subject.

The Need for an EMP and Solar Storm NOI

This NOI is not structured to deal with the unusual, powerful, and comprehensive impacts of EMP and/or solar storms. The questions in this NOI are oriented towards more conventional reliability issues and emergency communications situations.

For this reason, the Commission needs to set up an independent NOI devoted entirely to EMP and solar storm events, and protecting networks from these events. Both EMP and intense solar storm events are known to be real and they are recognized to be major threats to the integrity of the communications infrastructure and civil order within the United States.

Protecting networks and the communications infrastructure from EMP and intense solar storms is not a simple issue. Major technological, economic, and social aspects are involved in this issue. Establishing a formal NOI would be an effective way to begin discussion of these issues.

Respectfully submitted,

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May 18, 2011

Note 1

The text of the Congressional **Commission to Assess the Threat to the United States from Electromagnetic Pulse (EMP) Attack** is available at the web site:

www.empcommission.org
This document confirms the serious impact of an EMP attack on the infrastructure of the United States.

Note 2

Severe Space Weather Events – Understanding Societal and Economic Impacts
A Workshop Report
National Academy of Sciences
National Academies Press
Publication Year 2008
PAPERBACK
ISBN-10:0-309-12769-6
ISBN-13:978-0-309-12769-1
This document can be accessed online at the URL:
http://www.nap.edu/catalog.php?record_id=12507

Note 3

H. Robert Schroeder, **"Electromagnetic Pulse and Its Implications for EmComm**", QST magazine, November 2009, pages 38 through 41. [The term EmComm refers to emergency communication.]

Note 4

Petitions to the Commission by Donald J. Schellhardt and Nickolaus E. Leggett

Docket RM-5528, **Request to Consider Requirements for Shielding and Bypassing Civilian Communications Systems from Electromagnetic Pulse (EMP) Effects.**

Docket RM-10330, **Amendment of the Commission's Rules to Shield Electronics Equipment Against Acts of War Or Terrorism Involving Hostile Use of Electromagnetic Pulse (EMP).**

Note 5

Daniel N. Baker and James L. Green, **"The Perfect Solar Superstorm"**, Sky & Telescope, February 2011, Vol. 121 No. 2, Pages 28 – 34