International Civil Aviation Organization
North American, Central American and Caribbean Office

INFORMATION PAPER

E/CAR/NTG/8 & E/CAR/RD/6 — IP/04
03/09/18

Eighth Eastern Caribbean Network Technical Group (E/CAR/NTG/8) and Sixth Eastern Caribbean Radar Data Sharing Ad hoc Group (E/CAR/RD/6)

Saint George's, Grenada, 3 - 5 September 2018

Agenda Item 7: Other Business

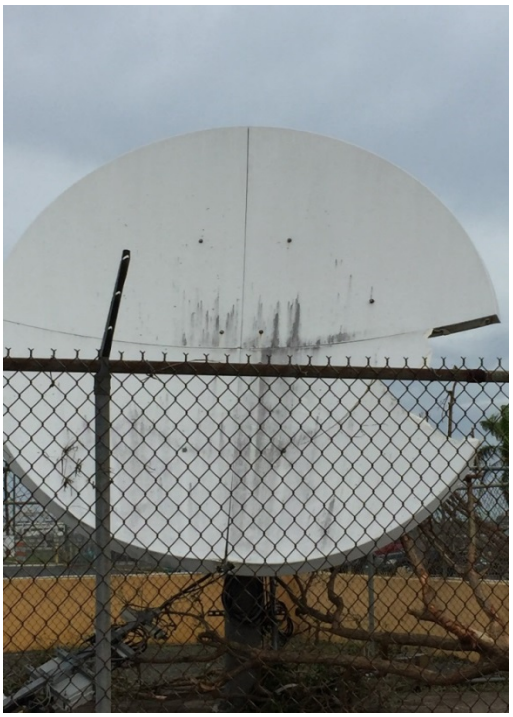
EFFECTS OF HURRICANE MARIA ON SAN JUAN, PR. MEVA

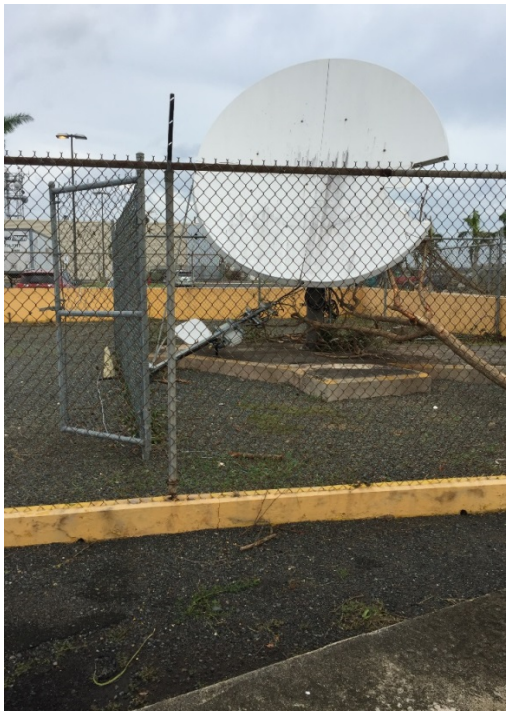
(Presented by the United States)

EXECUTIVE SUMMARY	
This information paper describes the destruction of hurricane Maria on MEVA equipment at the San Juan CERAP, and the aftermath to restore services.	
Strategic Objectives:	• Air Navigation Capacity and Efficiency
References:	• Eighteenth MEVA II Technical Management Group Meeting • (MEVA/TMG/18), Mexico City, Mexico, 20 to 22 February 2007 • Nineteenth MEVA II Technical Management Group Meeting (MEVA/TMG/19 26 to 27 February 2008 • Summary of Discussion and Conclusion • Frequentis MEVA-III Emergency Antenna Commercial Offer

1. Introduction

1.1 Common operating procedures to protect the antenna from hurricane force winds is to lay it on its back to resemble a birdbath, which protects it from flying debris. Unfortunately, due to limited personnel resources and the possibility of losing communications with neighbouring islands, these procedures were not performed. Ultimately, the hurricane severely damaged the antenna beyond all possible repair and the accompanying electronic were destroyed.

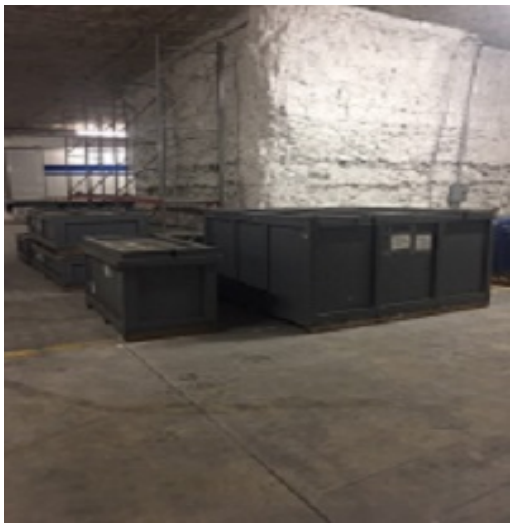




San Juan MEVA

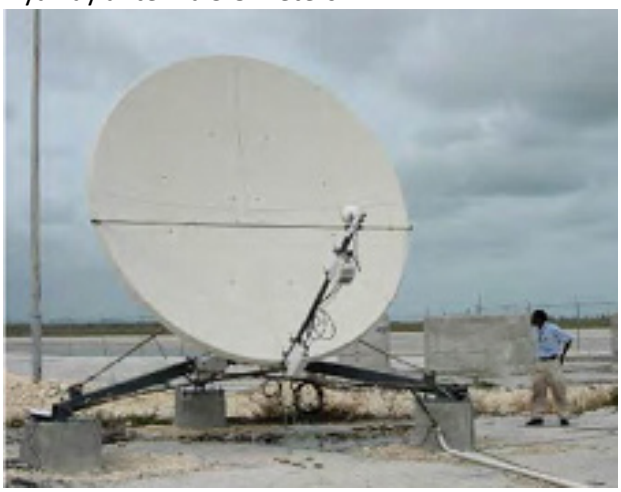
2. Action Taken

2.1. Delivery of a new antenna takes approximately 90 to 180 days. Due to the urgency of the situation, we tried to restore the aging MEVA 3.8m flyaway antenna stored in Independence, MO for the past 20 years. The components were found largely oxidised and inoperable due to its long period of storage. In addition, the antenna was stored in five large crates weighting close to an estimated 4000 pounds. The weight and size of the antenna alone made for difficult transport and the necessary repairs were going to be time consuming. As a result, we quickly realized that the size and condition of the antenna made it impractical for a quick deployment.



Antenna storage containers

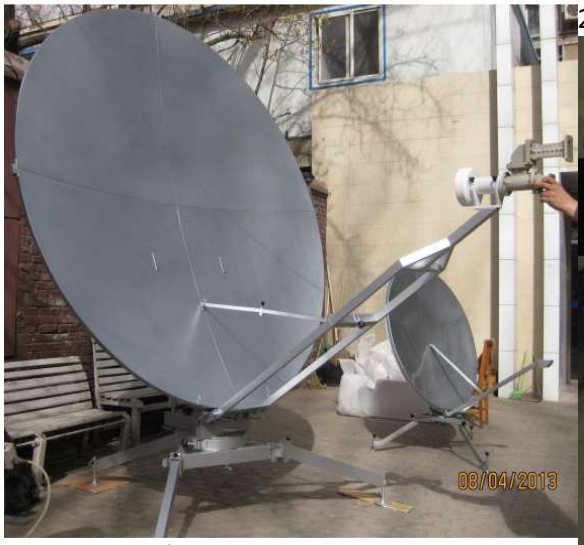
Flyaway antenna 3.8 meters



2.2 Since the flyaway antenna was deemed impractical and inoperable a decision was made to order a new antenna from General Dynamics. Due to the urgency, the order was expedited and the new antenna was delivered in record time - three weeks. The antenna was shipped to San Juan on a military transport and later moved to the CERAP for installation. MEVA services were restored on October 19, 2017.

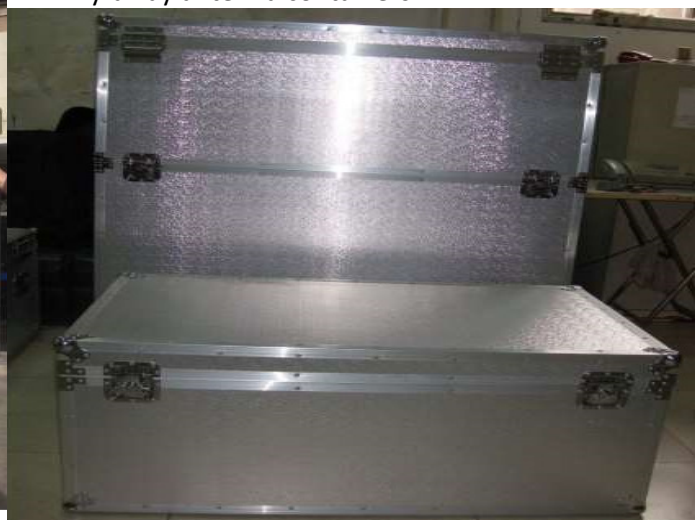
3 Contingency Plan

3.1 Frequentis has a proposal for a smaller, lighter antenna compatible with the current MEVA III. The proposed antenna has newer highly durable components, is more suitable to be rapidly deployed and maintained than its predecessor.



2.4m C-Band fly-away antenna

2.4m fly-away antenna containers



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