A Communications Plan for an International Response to a Threatening NEO

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2013 IAA Planetary Defense Conference

April 18, 2013

WORKSHOP

- November 14-15, 2011, Boulder, Colorado

- Laboratory for Atmospheric & Space Physics

- Participants:
  - NEO scientists
  - Science journalists
  - Risk communications experts
  - NASA, ESA officials
  - Association of Space Explorers
 - Secure World Foundation

RATIONALE FOR WORKSHOP

- Support of Action Team-14 of Working Group on Near Earth Objects (NEOs)

- Association of Space Explorers 2008 report urged creation of three entities to address potential NEO threat:
    - Mission Authorization and Oversight Group (MAOG)
    - Information, Analysis, and Warning Network (IAWN)
    - Mission Planning and Operations Group (MPOG)

IAWN is an essential part of global response to NEO hazard

From the ASE Report:
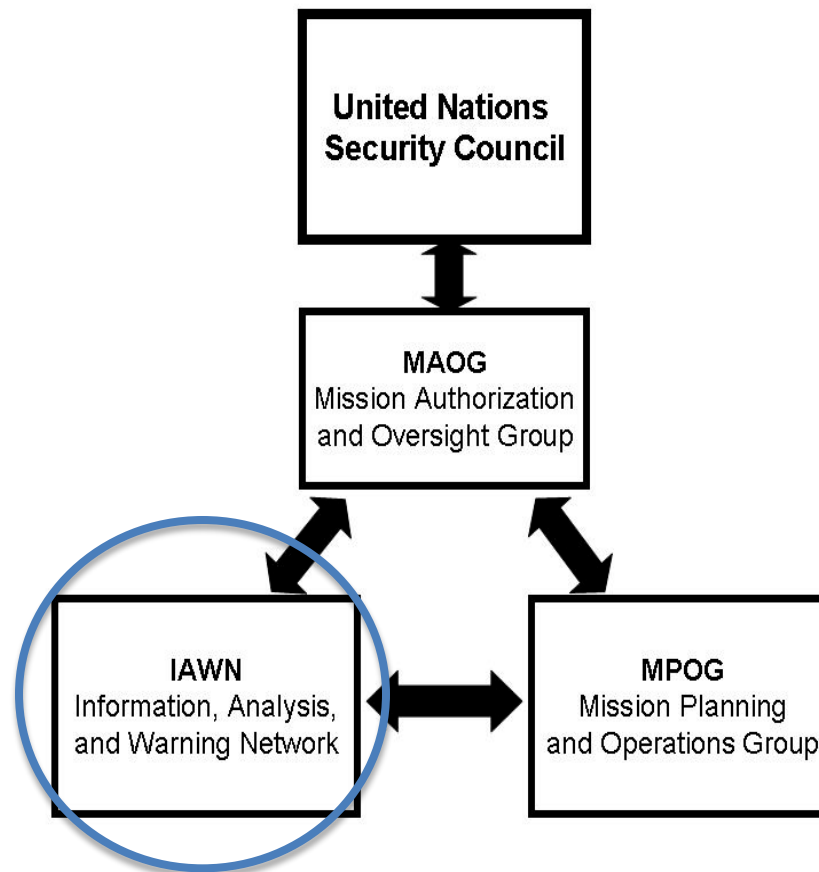
January 2010 report:

Workshop on a Near-Earth Object Information, Analysis, and Warning Network (IAWN):

- The IAWN should develop:
  - "a communications strategy, using well-defined communication plans and protocols."
  - "an outreach and education plan"

The November 2011 workshop was convened to explore these recommendations in more detail, especially in communicating levels of risk to the public

WORKSHOP QUESTIONS

- *What are effective tools to empower audiences with a tangible outreach and education plan, one that fosters accurate and timely information about the possible effects of a potentially hazardous NEO and what actionable steps can the IAWN take to assure effectiveness?*

- *How best to inform the public regarding NEOs and any Earth-threatening object in a way to avoid misinformation?*

- *What steps can be taken to develop an outreach and education plan, one that offers accurate and timely information about the possible effects of a potentially hazardous NEO?*

FINDINGS

- Establishing an effective communications strategy will require effective use of mass communication tools –television, Internet, and social networking tools; Any strategy requires a focus on:

- **Educating government officials—**
  - Few government officials know much if anything about NEO threats, outcomes, and possible responses.
  - The IAWN should develop an effective plan for educating policymakers and other stakeholders about the potential threat of NEOs and the range of possible responses.

- **General education—**
  - IAWN should develop a general NEO education program about the potential threat of asteroids and comets
  - The program should make use of all possible resources, including space agency materials, planetariums, university programs, and social media tools
  - Potentially use broadcast meteorologists as a key mechanism to familiarize the public with NEOs that pass close to Earth, e.g., YU55 close pass, November 2011

- ## Visuals are an ideal tool to convey scale and comparison to familiar objects
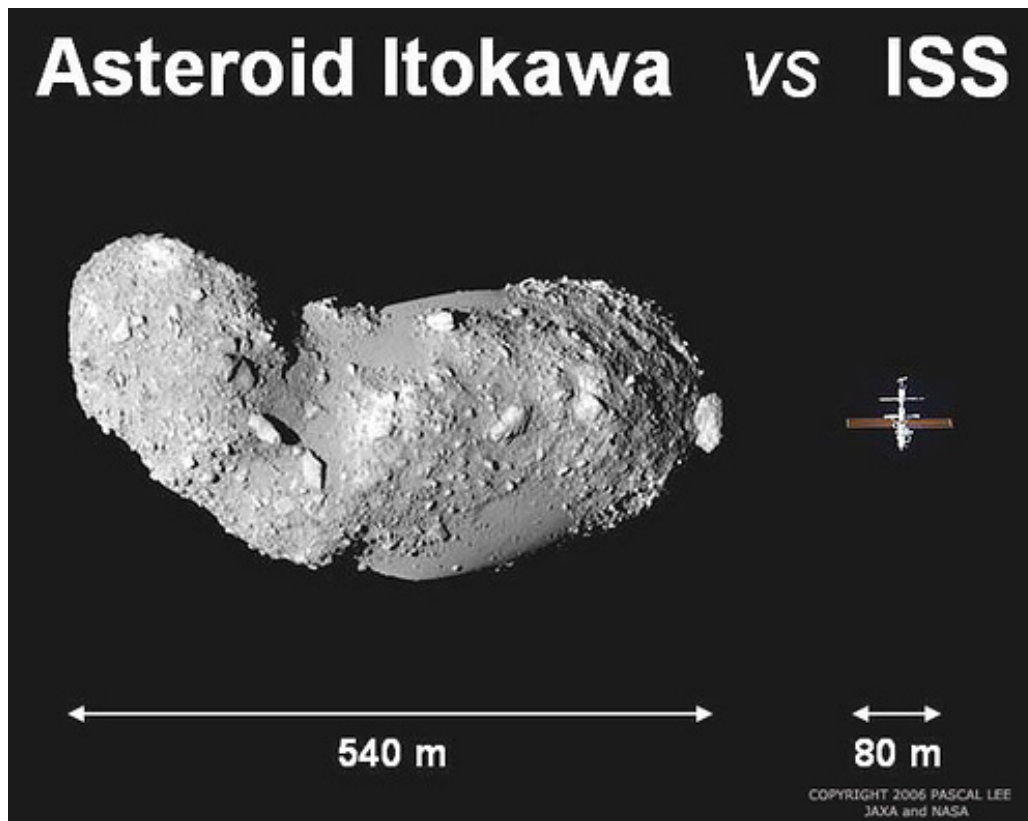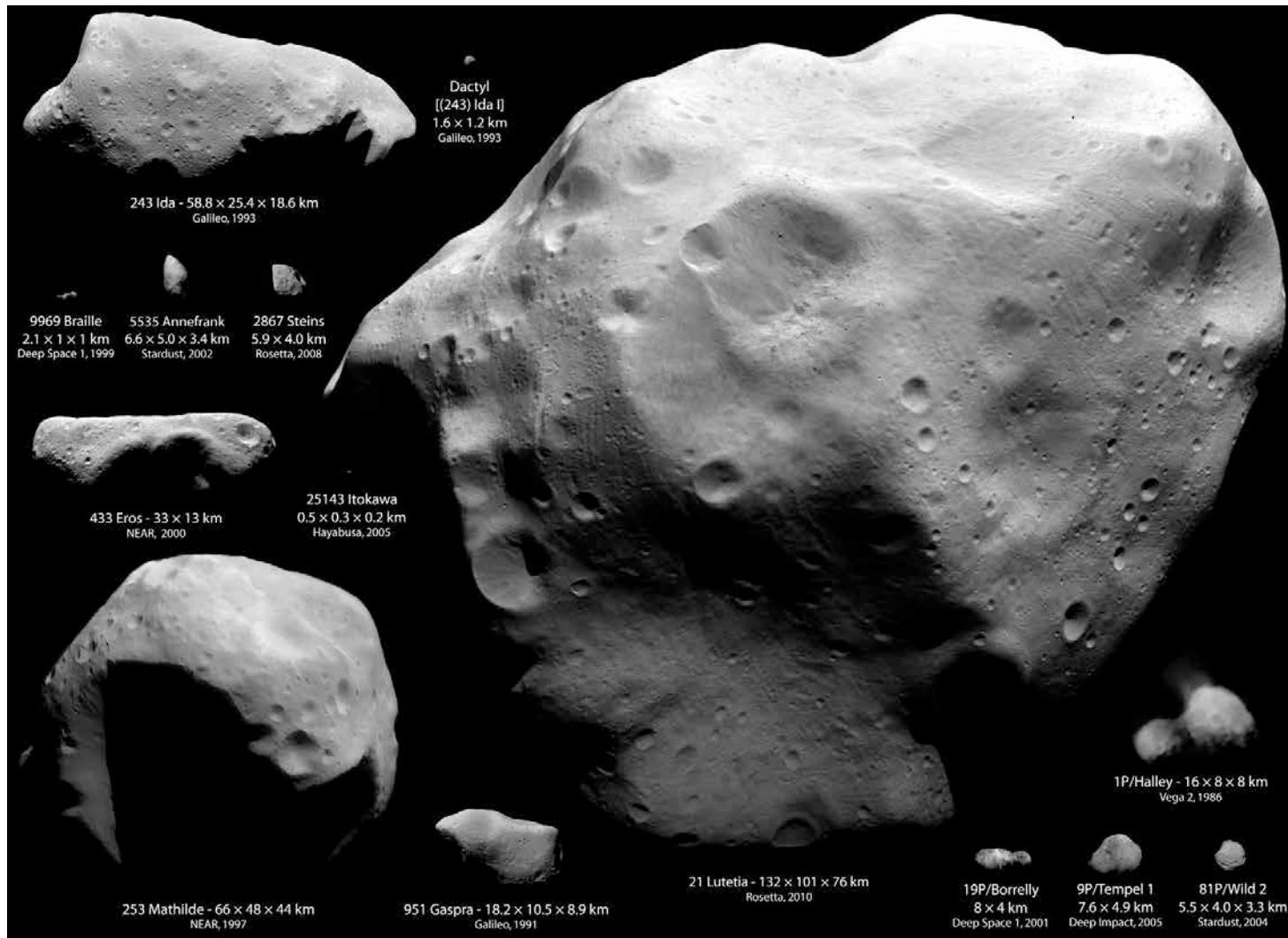
Asteroid Itokawa & Toronto's CN Tower

Credit: Artist Michael Carroll

2012 DA14 and Chelyabinsk

©Michael Carroll
background: Bernard Gagnon

- **Warning communication strategy and protocol**
  - Today, no worldwide disaster-notification protocol of any kind exists. Nevertheless, several regional disaster warning networks do exist, e.g., Tsunami network in SE Asia
  - IAWN should make use of the existing networks and develop a clear international communication chain of command for dealing with NEO risks
  - It should also be prepared to employ a wide array of public education tools

- # **Communications, cont.**
  - ## – Use familiar analogues, metaphors and visual imagery.
    - Visuals are an ideal tool to combat the public's misconceptions of NEO-related subjects and to bridge language barriers.
    - Comparison to familiar objects is also helpful

- **Communicating NEO levels of risk**
  - Experts on risk communication have carried out research on how best to communicate risk to affected populations.
  - IAWN should make use of the findings of experts in risk communications in designing a communications strategy
  - Explanations using the language of math and science work poorly in communicating risk to the public

- **Different levels of NEO risk require different types of communications**
  - the general threat—a general education program
  - a specific threat years in the future—details of plans to meet that threat
  - a situation of imminent threat (a few days to a few months)—what preparations are needed and how affected populations will be kept informed

- **The need for transparency**
  - Transparency is closely linked to credibility and trustworthiness.
  - IAWN should employ "trust agents" that have the appropriate skills to communicate adequately with non-expert audiences in as transparent a manner as possible.

- **Using lessons from uncontrolled reentry of spacecraft**
  - Recent reentries include:
    - UARS (NASA) – September 2011
    - ROSAT (ESA) – October 2011
    - Phobos-Grunt (RSA) – January 2012
  - Each of these reentries gave rise to different lessons learned
  - Expect media distortions and prepare to counter them with continuous updates

- **The Mystery and Promise of NEOs**
  - Asteroids have potential to intrigue as well as threaten
  - NEO education should include both the mystery and promise of NEOs in order to present a balanced picture of these solar system bodies
    - What NEOs can tell us about the origins of the solar system
    - Composition of NEOs (asteroids and comets)
    - Long term potential for asteroid mining

For Copies of the Near Earth Object Media/Risk Communications Working Group Report
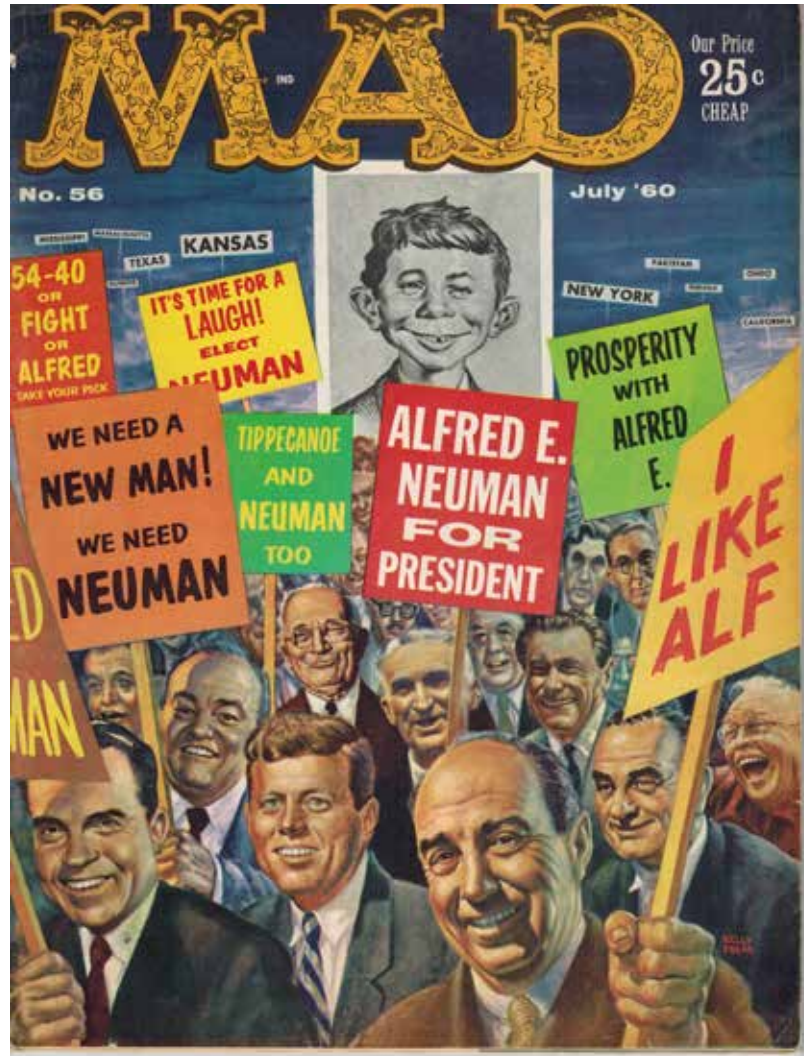
On the Secure World Foundation website

at: http://swfound.org/

Or go to:

http://swfound.org/media/82686/SWF%20NEO_Media_Risk_Communications_Working_Group_Final_%20Report_June_%202012.pdf

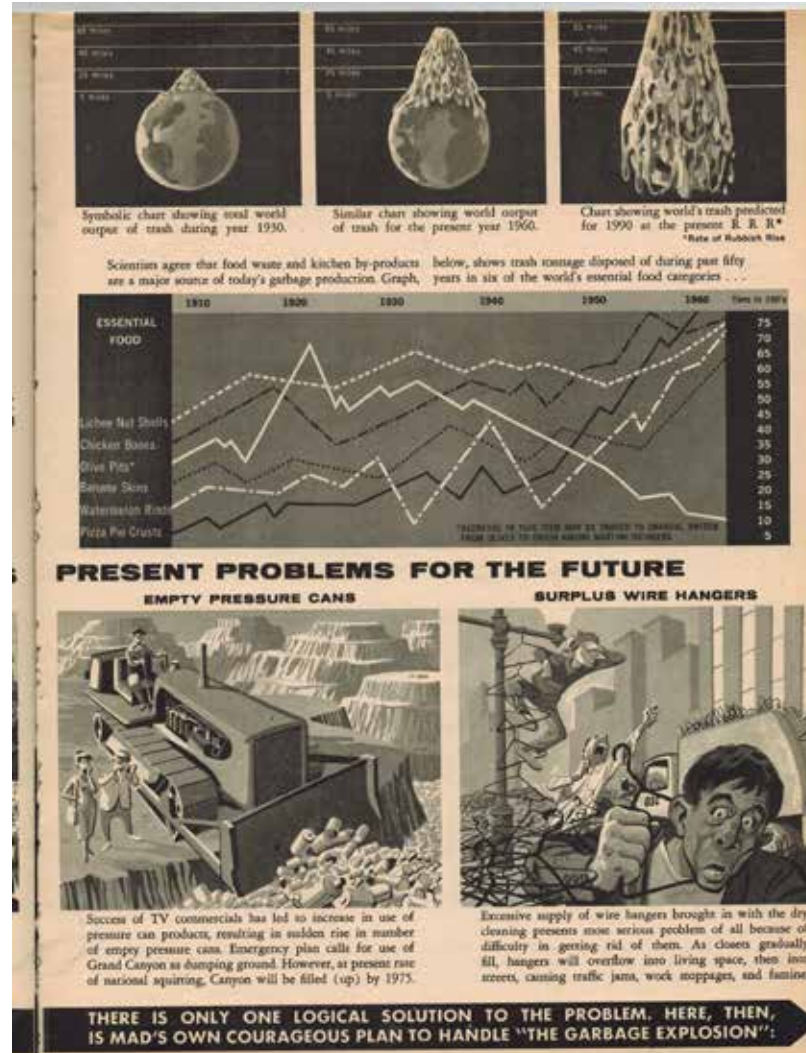## Comet Flyby of Mars 2014

Thank you
Questions?