

出國報告（出國類別：其他）

出席美國飛航管制協會(ATCA)
年會出國報告書

服務機關：交通部民用航空局

姓名職稱：薛少怡 簡任技正

派赴國家：美國

出國期間：100年10月1日至10月7日

報告日期：100年12月26日

出席美國飛航管制協會 56 屆年會出國報告書

目錄

壹、前言與目的 -----	2
貳、行程 -----	3
參、會議過程 -----	4
肆、心得與建議 -----	13
伍、附件 -----	14

出席美國飛航管制協會 56 屆年會出國報告

壹、前言與目的

美國飛航管制員人數超過五千人，為全世界最多人數的國家，相關的協會就有美國飛航管制協會(ATCA USA)、國家飛航管制協會(NATCA)及美國女性飛航管制員協會(WATCA USA) 等 3 個協會，不僅名稱不同，對於會員也有不同之限制。其中，美國飛航管制協會會員人數最多，除民航與軍方飛航管制員外，尚包含運輸部、國防部及美國聯邦航空總署等政府部門人員，以及相關政府部門之合約商、系統製造商、航空公司等，均可加入該協會成為會員。

美國飛航管制協會年會為北美洲最盛大也是最重要的年會之一，與會者除了美國各地區之會員及國際民航機構主要人員外，另有許多知名的航管系統的廠商與會，會議期間並展示各類先進航管系統。經由本年會除可與美國及其他國家負責民航政策及執行之政府官員接觸，彼此可交換工作經驗及心得；此外，亦可趁此年度盛會了解國際上有關航管之最新發展潮流及趨勢，同時掌握並收集航管相關系統之發展資訊，做為未來我國航管系統精進及更新之參考。

貳、行程

- 10月1日 自桃園國際機場 搭乘長榮航空公司 BR032 班機經美國紐約轉機至華盛頓特區。
- 10月2日至5日 出席年會。
- 10月6日至7日 搭機離開美國華盛頓特區至紐約，轉機搭乘長榮航空公司 BR031 班機經曼谷，返回桃園國際機場。

參、會議過程

一、 美國華盛頓特區

華盛頓哥倫比亞特區（Washington, D.C.）是美國的首都，位在中大西洋岸地區（mid-Atlantic），是 1790 年做為首都而設置，由聯邦政府直接管轄的特別行政區；¹¹特區土地原來來自北鄰馬里蘭州和南鄰維吉尼亞州，兩州界河波多馬克河由西北向東南流貫特區；1846 年以後，波多馬克河南岸的土地交還給了維吉尼亞州，該河便成為特區與維州的界河。

哥倫比亞特區設立早期，波多馬克河北岸有喬治城鎮、華盛頓市，以及華盛頓郡三個分開的行政區劃；其中建立於 1791 年的華盛頓市乃為彰顯喬治華盛頓對美國建國的貢獻而命名，後來發展為特區中的核心城市。依據一項 1871 年的立法，前述三區於 1878 年合併為「華盛頓市」，由聯邦管轄的特區及華盛頓市地方政府從此轄區重疊，因此常合稱「華府」。除美國聯邦政府機關外，華府還是許多國際組織總部的所在地，例如世界銀行、國際貨幣基金和美洲國家組織。

華盛頓有眾多的人文景觀，例如美國國會大廈、白宮、華盛頓紀念碑、傑佛遜紀念堂、林肯紀念堂、富蘭克林羅斯福紀念碑、國家第二次世界大戰紀念碑、韓戰老兵紀念碑、越南戰爭老兵紀念碑、哥倫比亞特區第一次世界大戰紀念碑和愛因斯坦紀念碑。和特區內的博物館一樣，大多免費開放。華盛頓紀念碑可乘電梯到頂，觀賞特區的景色。



國會山莊



華盛頓紀念碑



林肯紀念堂



博物館

二、此次會議的地點位於 National Harbor Gaylord National Resort and Convention Center 會議中心，位於郊區鄰近河岸邊，是著名的觀光旅遊勝地，交通及相關設施等還算方便，但房價及物價並不便宜。因為差旅費用之限制，也為了節省費用，只好選擇住在低價位而較遠地區的旅館，幸好會議中心與旅館間有交通車往返，雖然早晚固定時間各二班，但是該會議中心同時有許多其他會議進行中，許多國家的人員也是選擇此低價位之旅館，因此偶爾出現交通車因人數過多，部分人員必須等候車輛回來後，才得搭上即前往會議場所，或由會議場所返回旅館，有人曾與旅館服務人員抱怨，是否加開一輛車，但並無任何改善情形。



Gaylord National Resort and Convention Center 會議中心外觀



Maryland Ballroom 會議室

三、 會議過程

本次會議於10月3日上午0800時由美國飛航管制協會理事長 Mr. Peter F. Dumont 主持開幕式，緊接著就開始為期三天的年會（會議議程如附件）。本次會議參加的廠商超過一百家為歷年最多，而註冊參加的來賓超過千人，據聞已打破往年紀錄，規模之盛大不亞於國際航管協會年會。

會議分為 8 個議題，包括：(1) Interactive Leadership Panel、(2) Earthquake, Tsunamis, Volcanoes, OH MY!、(3) Spectrum Challenges for GPS Navigation、(4) Fatigue in Public Safety、(5) NextGen Workforce Challenges、(6) Global Harmonization、(7) How Long Should We Maintain Two NASs、(8) Future Aviation Advisory Committee，邀請各航空領域專家，包含美國聯邦航空總署(FAA)、美國國防部(DOD)、美國運輸部(DOT)、美國國家海洋及大氣管理局(NOAA)、國際民航組織(ICAO)、國際飛航管制員協會聯盟(IFATCA)、國際民航服務組織(CANSO)、國際航空公司駕駛員協會聯盟(IFAPA)、航管單位，航空公司及系統製造商等共同討論。另外也邀請日本民航局(JCAB)、冰島航管協

會(IATCA)及歐洲航管聯盟(EUROCONTROL)等人員，就其境內所遭遇之地震、海嘯及火山爆發等天然災害，親身經歷之過程及應變處理方式提出分享。其中兩個議題「How Long Should We Maintain Two NASs」及「Future Aviation Advisory Committee」，因大會限制必須是正式會員方能進入會場參加，因此只能於會後透過交換名片，及詢問參與會議之會員，才能大約了解議題內容。

8 個議題摘述如下：

(一) Interactive Leadership Panel

無論是在空中或是在地面，更大的可預測能力和更少的航班延誤是下一代航空系統所預期的，因此以更精確、強化技術及作業程式改進的飛行路徑，將使得更優化的剖面下降(Profile Descend)能夠結合所有利害關係業者的情境警覺與合作，並強化使用者的意願。另外配合將改善天氣資訊融入決策支援工具，減少天氣對飛行操作的影響。

前面兩者和更多其他益處，是航空界對於下一代航空系統所期望的。該小組及會議與會者互動討論，針對NexGen、轉型中的ADS-B計畫、CATM-T、Comm 資料、NEW、NVS、SWIM 等系統提出解決方案。

(二) Earthquake, Tsunamis, Volcanoes, OH MY!

在過去 24 個月內，航空業一直為火山爆發、地震與海嘯所困擾，在未來，很可能也將輻射及天氣納入。整體而言，這些事件之發生，其影響不僅是航空業界而已，也同樣影響也一般的社會經濟，可達數十億美元。因此藉由當事人現身說明，回顧這些破壞性事件影響層面，未來從國內及國際角度，該如何面對，以及如何解決天然災害所造成整體影響。

讓人印象深刻的是日本仙台機場因海嘯之衝擊，無法使用而關閉。

然日本政府爲了能夠讓外界物資迅速進入災區，整合派遣人力與支援，於不到一個月時間內就清除大部分機場內設施，供運送緊急物資之航機起降。而另在一個半月的時間內，就全面開放恢復機場設施，供民航機起降使用，此種高效率的專業與敬業態度，讓所有與會人員佩服與讚嘆。

(三) Spectrum Challenges for GPS Navigation

在今天高度流動性的世界，無線電頻譜已成爲非常重要。個人移動設備正在變得越來越普及，無線技術正在迅速成爲運輸的首選方法。美國提議以集成無線寬頻和衛星網絡技術，形成整體網際網路服務，當然也包括偏遠地區。這項網路服務，確實爲美國的大部分地區帶來了網際網路便利性。然而這項提議使用的頻譜，因某些地區普遍使用，產生潛在的有害干擾全球衛星定位導航，進而對美國聯邦航空總署擬議的下一代航空系統，產生不利影響。該小組提出網路頻譜規劃，並完成及進行研究和測試的當前狀態，這些衝擊不僅影響美國聯邦航空局的衛星導航計畫潛在的問題，也影響一般導航產業。

(四) Fatigue in Public Safety

疲勞是生活的一部分，每個人都有相同經驗，無論在每一天的不同時間，或是不同層面。因爲提供安全和健康的關鍵服務的能力與公眾的信任是有著緊密的關係，美國公共安全業進行一項特殊的重要工作，在日常生活中所依賴的服務，預計達到在 100% 的零缺陷。我們經常看到媒體的報導，疲勞實爲多數運輸和其他意外事件之重要因素。沒有任何單一的公式，也沒有靜態疲勞的相關文件，可以研究及採取補救措施。也因每個人不同的行爲、生理因素和相關的心理疲勞，可以幫助消弭疲勞問題。該小組討論如何確保關鍵職業安全的挑戰，並提供深入瞭解複雜的疲勞影響和找到可行的答案。大多數與會人員均表同意，政府部門應重視這個問題，並訂定相關

法令與配套措施

(五) NextGen Workforce Challenges

下一代航空系統為轉型國家意義深遠的事業，而轉型則需要更多方面技術。然而，必須平衡下一代航空系統之人類範圍（包括不僅是知識，技能和能力，也包含行爲，期望，文化等），進行必要的修改，以實現其潛在相關者之益處。社會科學家和經驗教導我們，大系統的重新設計改造最困難不是技術的部分，而是由員工及其組織行爲和文化所需要的調整或改變。

(六) Global Harmonization

新的技術提昇和航空能力正在世界各地迅速擴大，NextGen 和 SESAR 代表兩個主要航空系統的變化，正在世界各地進行。兩者主導系統技術提昇，遠比其他航空系統者要超前很多，並且也帶來航空業，包括從製造業者到經營者，到機載系統的相容性與地面基礎設施等，更先進的想法及概念。

新技術的全球一致性與互通性，已引起國際民航組織關注，也開始試圖鼓勵通過"策略規劃"，促使飛航服務提供者、製造商和航空公司，提昇其飛航管理系統。美國與歐盟已簽訂合作協定，緊密合作開發和部署的各自的系統，以確保系統與使用者之間之相容性。然而，有些國家與飛航服務提供者在發展完成升級的系統時，可能無法與建置中的 NextGen 和 SESAR 無法相容，也許可能相容。因此，該小組將討論一些主要的飛航服務提供者如何將他們正在發展與建置中的系統，能夠與其他系統相容。討論中包括如何面臨系統全球一致性的挑戰、障礙及如何相容等議題。

(七) How Long Should We Maintain Two NASs

NexGen 是一種外觀和實際運作不同於今天的國家空域系統(NAS)，

雖然正持續發展中，目前國家空域系統仍需依賴地面系統，未來的空域系統將仰賴衛星導航和監視系統。性能導航的程式正在增加，衛星監視的部署也在進行中，但兩者皆並存於廣泛陸基基礎設施。該小組成員討論由陸基基礎設施轉型為 NexGen 所面臨的挑戰，以及可能的解決方案。

(八) Future Aviation Advisory Committee

未來航空諮詢委員會將提供運輸部首長相關資訊、諮詢和建議，以確保其能夠滿足不斷發展的運輸需求、挑戰、全球經濟的機會和美國航空業的競爭力。該委員會評估在下列的基本變化，並確定這種變化的驅動因素和產業發展提出的挑戰和機遇：

1. 應對環境挑戰
2. 平衡產業的競爭能力和生存能力
3. 確保強大的航空工業所必需的世界一流勞動力
4. 確保航空安全
5. 保護航空系統的穩定與充足的資金



美國飛航管制協會理事長 Mr. Peter F. Dumont 主持開幕式



各議題演講者及討論情形

四、 經過三天的報告及討論，本次年會於 10 月 5 日下午 1600L 結束。國際民航服務組織(CANSO)宣布將於 2013 年 2 月 12 至 14 日在西班牙馬德里召開有關飛航管理系統之全球高層會議。

五、 展覽會場

每年 ATCA 年會舉辦時，都會同時在現場開放一些攤位供廠商或會員租用。本次年會亦不例外，現場總計約有百餘個攤位開放，大部分皆由與航管作業系統有關之廠商租借，以展示相關產品，如 THALES、SENSIS、FREQUENTIS、NORTHROP GRUMMAN 及 EUROCONTROL 等知名廠商在現場均有攤位展示新一代航管自動化系統，也準備許多紀念品讓參觀者自由索取。大會特別印製展覽廠商攤位導引說明書，讓會員可以先行搜尋想要參觀的攤位，預先規劃動線，以免因參展廠商過多，迷失方向或動線，而錯失參觀機會。另外大會也於中間休息時間，將飲料及點心安排於展覽會場，讓會員有更多機會及時間參觀各項航管系統。



會場廠商展示

肆、心得與建議

一、 美國飛航管制協會每年均會舉辦航空各領域傑出人員獎項評選，並於大會期間頒獎表揚，這些獎項是由政府單位、系統製造商及大會提供之紀念獎，各領域之提名人選經過嚴格評選，最後在大會中接受頒獎時，每個人臉上都充滿無比的榮耀。我國飛航管制員協會過去也曾舉辦類似之傑出會員選拔，然因推薦人選及評選過程，被質疑有不公平之處，因此而停辦。去年因協會辦理第 27 屆飛航管制員聯盟亞太地區年會，為鼓勵會員為航管單位或是協會有更多之貢獻，而恢復辦理傑出會員選拔，然此規模與美國飛航管制協會舉辦之航空各領域傑出人員獎項，實在是無法相比。

二、 美國飛航管制協會會員包含航空各領域，協會經費來源充裕，另由部分系統製造商及合約商提供相當之獎學金經費，並設立包含 Gabe A. Hartl、Buckingham Memorial 及 Student 等 3 項獎學金，針對各大學相關航空領域科系之優秀學生，每年均經由申請及嚴格評選後，提供相當之獎學金，確保他們未來能夠完成更優質的教育，進而培養對航空領域更優質的專業。

我國目前並未有如此之獎學金機制，且飛航管制人員之進用，皆為經由國家考試，並完成相關訓練，取得認證後，始得成為飛航管制人員。如為長期培養對飛航管制有興趣之大專院校優秀學生，亦可由我飛航管制員協會名下設立獎助學金，經費來源可經由協會全體會員及其他航空領域之公司團體認捐，並由協會基金提撥，每年視募得之款項提供數名名額之獎助學金，另尚須輔導其做好國家考試之準備，通過國家考試及完成訓練，此為基金會設立之目的。然此目標需獲得會員與航空業者普遍支持，才有可能達成。

三、 本局每年均派員參加美國飛航管制協會及國際飛航管制員協會聯盟所舉辦之年會，從參與各項會議中，確實可獲知最新國際航管趨勢之資訊，

並可加強與國際民航界之交流，有助於未來國際航管業務之協調與合作。但參與國際會議並不容易，除了專業素養外亦需有優異之語文能力，更需於事前充分準備，方能有效掌握會議內容並參與討論。建議今後本局應更積極參與類似國際性會議，強化國際聯繫，吸取他人之經驗，以培養人才，提昇我國在航管領域之影響力。

- 四、 美國在今年曾發生幾起航管人員因睡眠問題，導致航機無法順利起降情況，嚴重影響航管人員之形象，其他國家也有些許類似情形，本次會議將航管人員之疲勞問題，列為議題之一，並邀集美國聯邦航空總署、華盛頓都會運輸管理局、阿靈頓睡眠醫學中心及國際飛航管制協會聯盟等專家學者進行研討。然因疲勞問題於美國尚無相關法令，國際民航組織亦無相關規範，明確訂定飛航管制人員如何值班方式，以避免疲勞問題之發生，因此未能有明確的結論，但大多數與會人員均表同意，政府部門應重視這個問題，並訂定相關法令與配套措施。

我國雖未發生前述情形，但為因應世界之潮流，及預防航管人員疲勞問題產生，民航局已由飛航管制組邀集飛航服務總臺及民航人員訓練相關人員，成立「檢視飛航管制員疲勞管控」專案小組，就制度、人力狀況及醫學研究等定期研討，參考其他國家現行之制度及配套措施，並將訂定合理之飛航管制原班務實施要點，期能避免航管人員因值班時數過長或休息時間過短，影響其身心狀況進而產生疲勞，而對飛安造成潛在影響。

伍、附件



Agenda

Gaylord National Resort and Convention Center National Harbor, Maryland October 2 - 5, 2011

SATURDAY, OCTOBER 1, 2011

11 am – 6 pm Exhibitor Registration
Convention Center Pre-Function

SUNDAY, OCTOBER 2, 2011

9 am – 1 pm Board of Director's Meeting
Fort Washington Board Room

9 am – 7 pm Exhibitor Registration
Convention Center Pre-Function

3 pm – 7 pm General Registration Open
Convention Center Pre-Function

MONDAY, OCTOBER 3, 2011

7 am – 6 pm Registration Open
Convention Center Pre-Function

7 am – 4 pm Moderators/Speakers/Coordinators Ready Room Open
Chesapeake I

7:30 am – 8 am Welcome Coffee sponsored by **IBM**
Maryland Ballroom Foyer

8 – 8:30 am **Opening Ceremony and Remarks**
Maryland Ballroom A/C
Mr. Pete Dumont, *President and CEO*, Air Traffic Control Association
Monte Belger, *Chairman*, Air Traffic Control Association, and *Vice President of Industry Affairs*,
Metron Aviation

8:30 – 9 am **The Honorable J. Randolph Babbitt**, *Federal Aviation Administration*
Maryland Ballroom A/C

9 am – 10 am Grand Hall Opening/Break with Exhibitors
Exhibit Hall D & E
Sponsored by **NATCA**

10 – 10:15 am **State of the ATO address**
Maryland Ballroom A/C
Rick Ducharme, *Federal Aviation Administration*

10:15 – 11:30 am **SESSION 1: Interactive Leadership Panel**
Maryland Ballroom A/C

Greater predictability and fewer flight delays in the air and on the ground. Improved flight paths with greater precision, enhanced with technologies and operational procedures allowing Optimized Profile Descents. Shared situational awareness and collaboration among all stakeholders to enable user

preferences. Improved weather information assimilated into Decision Support Tools to reduce the impact of weather on flight operations. These and many other benefits are what the aviation community expects from NextGen. This panel will engage in a dynamic exchange with conference attendees on the progress, challenges and future outlook of the six NextGen Transformational Programs-ADS-B, CATM-T, Data Comm, NNEW, NVS, SWIM-and the seven solution sets. Come prepared with your questions!

Moderator:

- **Charlie Keegan**, *Raytheon*

Speakers:

- **Steve Bradford**, *Federal Aviation Administration*
- **Greg Burke**, *Federal Aviation Administration*
- **Matt Hampton**, *Department of Transportation*
- **Rob Tucker**, *Federal Aviation Administration*

Coordinator:

- **Kelly Shea**, *Lockheed Martin*

11:30 am – 1:30 pm
Maryland Ballroom B/D

Awards Luncheon

1:30 pm – 2 pm
Maryland Ballroom A/C

David Grizzle, *Federal Aviation Administration*

2 pm – 3:15 pm
Maryland Ballroom A/C

SESSION 2: Earthquakes, Tsunamis, Volcanoes, OH MY!

Over the past 24 months the Aviation Industry has been plagued by volcanic eruptions, earthquakes, and tsunamis; in the future it is likely we will also add radiation and space weather to this list. As a whole, these events can cost not only the aviation industry but also the general economy, who depends on aviation, upwards of Billions of dollars. This panel will recap the impact's the disruptive events had as well as look to what we are doing today to address these events in both the domestic and international communities from both an operational (CDM) and regulatory standpoint. This panel will also address what isn't being done today that should be to ensure we are prepared for the next disruptive events with the end goal in mind of making the extraordinary, ordinary.

Moderator:

- **Norm Fujisaki**, *Metron Aviation*

Speakers:

- **Takeshi Imagome**, *Japan Civil Aviation Bureau*
- **Sigurdur Holmar Johannesson**, *Icelandic Air Traffic Controllers Association*
- **Mark Libby**, *Federal Aviation Administration*
- **John O'Sullivan**, *Harris Corporation*
- **Joe Sultana**, *EUROCONTROL*
- **Jason Tuell**, *National Oceanic and Atmospheric Administration*

Coordinator:

- **Lisa Sullivan**, *Harris Corporation*

3:15 pm – 3:45 pm
Exhibit Hall D & E

Break with Exhibitors

3:45 pm – 5 pm
Maryland Ballroom A/C

SESSION 3: Spectrum Challenges for GPS Navigation

Radio spectrum has become extremely valuable in today's highly mobile world. Personal mobile devices are becoming more and more commonplace and wireless technology is rapidly becoming the preferred method of transport. LightSquared is a proposed wholesale-only integrated wireless broadband and satellite network to bring internet service to the United States, including rural areas. This proposed network, not only brings the internet to most areas of the US, but holds out the promise for many services to be provided by a host of new companies. The widespread use of some portions of the spectrum proposed to be used by LightSquared presents the potential for detrimental interference to GPS navigation, negatively affecting the FAA's proposed NextGen strategy. This panel

will present the current state of the proposed project, the policy issues, and the policy debate over spectrum usage. Information will be provided on the work and studies both completed and planned, and technical issues underlying the potential conflict between the wireless network and GPS navigation. The panel will outline the current state of the proposed network's spectrum plan and ongoing and completed studies and testing. The impacts not only present potential problems to FAA's satellite based navigation plans but also to the general navigation industry as well.

Moderator:

- **Carlos Solari**, *CSC*

Speakers:

- **Jeff Carlisle**, *Lightsquared*
- **Chris Hegarty**, *MITRE Corporation*
- **John Hickey**, *Federal Aviation Administration*
- **Anne Swanson**, *Dow Lohnes PLLC.*
- **Jennifer Warren**, *Lockheed Martin*

Coordinator:

- **David Lantzy**, *CSC*

5 pm – 6:30 pm
Exhibit Hall D & E

Welcome Reception with Exhibitors to Honor Our International Guests
Sponsored by **Raytheon**

6:30 pm

Exhibit Hall Closes

TUESDAY, OCTOBER 4, 2011

7 am – 5 pm

Convention Center Pre-Function

Registration Open

7:00 am – 8:00 am
Maryland Ballroom Foyer

Welcome Coffee sponsored by **Selex**

7 am – 4 pm
Chesapeake I

Moderators/Speakers/Coordinators Ready Room Open

8 am – 9 am
Maryland Ballroom A/C

Captain Eric Moody, *Retired British Airways 747 Captain*

9 am – 10:15 am
Maryland Ballroom A/C

SESSION 4: Fatigue in Public Safety

Fatigue is a component of life that we all experience at different levels at different times every day. Public safety occupations carry a special importance because the ability to deliver safety and health critical services is inextricably connected to the public trust. We have been led to expect 100 percent and zero defects in the services we depend on in our daily lives. We regularly see reports in the media that point to fatigue as a contributing or causal factor in major transportation and other incidents. There is no single formula, no static fatigue profile that can be studied and remedied. It is different for every person. There are however, contributing factors, behaviors, physiology and psychology associated with fatigue that help us in our search for mitigation. This panel will discuss challenges of ensuring safety in critical occupations and offer insight into the complexities of addressing the impact of fatigue and finding workable answers.

Moderator:

- **Alan Levin**, *Bloomberg News*

Speakers:

- **Alexis Brathwaite**, *International Federation of Air Traffic Controllers Associations*
- **Jim Dougherty**, *Washington Metro Area Transit Authority*
- **Dr. Deborah Gofreed**, *Arlington Sleep Medicine*
- **Jeff Richards**, *National Air Traffic Controllers Association*

Coordinator:

- **Pat Forrey**, *Forrey Associates*

9 am Exhibit Hall D & E	Exhibit Hall Opens
10:15 am – 10:45 am Exhibit Hall D & E	Break with Exhibitors: Coffee sponsored by URS-APPTIS Snacks sponsored by JMA Solutions
10:45 am – 12:15 am Maryland Ballroom A/C	<p>SESSION 5: NextGen Workforce Challenges</p> <p>NextGen is described as a transformational undertaking of profound national importance. A transformation of this scope requires more than technology. Together, we must balance our attention to the necessary changes in the human dimensions of NextGen (including not only knowledge, skills, and abilities, but also behaviors, expectations, culture, etc.) in order to realize its potential benefits for all stakeholders. Social scientists (and experience) teach us that the most difficult elements to transform in a major system redesign are not the technical components, but rather the behavioral and cultural adjustments required by the workforce and their organizations.</p> <p>Moderator:</p> <ul style="list-style-type: none"> • David Sweet, <i>Consultant for The Boeing Company</i> <p>Speakers:</p> <ul style="list-style-type: none"> • Rick Ducharme, <i>Federal Aviation Administration</i> • Bruce Freedman, <i>SRA International</i> • Paul Rinaldi, <i>National Air Traffic Controllers Association</i> • Robert Torn, <i>International Federation of Airline Pilots Associations</i> • Mike Wambsganss, <i>Crown Consulting Inc.</i> • Abe Zwany, <i>Booz Allen Hamilton</i> <p>Coordinator:</p> <ul style="list-style-type: none"> • Pat Forrey, <i>Forrey Associates</i>
12:15 am – 1:45 pm Maryland Ballroom B/D	Keynote Lunch Featuring: Scott Altman , <i>NASA Astronaut</i> and ATCA Membership Meeting sponsored by SRA International
1:45 pm – 3:00 pm Maryland Ballroom A/C	<p>First ICNS Session Moderator: Mike Harrison, ICNS Executive Committee, Aviation Management Associates</p> <p>“Alternate Position, Navigation and Timing – The Need for Robust Radionavigation” Mitch Narins, Federal Aviation Administration</p> <p>“Graphical Data Linked TFRs and NextGen” Gary S. Livack, Federal Aviation Administration</p> <p>“Applications Survey for the Future aeroMACS” Chris Wargo, Mosaic ATM.</p> <p>“Satellite Based Voice Communications for Air Traffic Management and Airline Operations” Dieter Eier, Frequentis USA</p> <p>“GBSAA Radar with Altitude Processing Supporting UAS in the NAS” Robert Stamm, Raytheon</p>
3 pm – 3:45 pm Exhibit Hall D & E	Ice Cream Break with Exhibitors sponsored by Midwest ATC
3:45 pm – 5 pm Maryland Ballroom A/C	Second ICNS Session Panel Moderator: Chip Meserole, ICNS Executive Committee, The Boeing Company

"A Validation Study of Merging and Spacing Techniques in a NAS-Wide Simulation"
Patricia Glaab, NASA

"Tower Flight Data Manager Decision Support Tools"
Mary Ellen Miller, Mosaic ATM

"Surface Conformance Monitoring in a NextGen Timeframe"
Paul A. Diffenderfer, Federal Aviation Administration

"A Fully-Dynamic Network Flow Model of the NAS"
Tim Myers, Metron Aviation.

5 pm Exhibit Hall Closes, Open Evening

WEDNESDAY, OCTOBER 5, 2011

7 am – 2 pm Registration Open
Convention Center Pre-Function

7 am – 4 pm Moderators/Speakers/Coordinators Ready Room Open
Chesapeake I

7:30 am – 8:30 am Welcome Coffee sponsored by **Engility Corporation**
Maryland Ballroom Foyer

8 am – 8:30 am Keynote: **Nancy Graham**, *International Civil Aviation Organization*
Maryland Ballroom A/C

9 am Exhibit Hall Opens
Exhibit Hall D & E

8:30 am – 9:45 am **SESSION 6: Global Harmonization**
Maryland Ballroom A/C

The proliferation of new technology and aviation capabilities is rapidly expanding across the globe. NextGen and SESAR represent two of the major aviation system changes ongoing throughout the world. Both initiatives are seemingly farther ahead than most other world aviation systems, and has brought about a growing concern throughout the aviation industry, from manufacturers to operators, on the compatibility of airborne systems and ground infrastructure. Global harmonization and interoperability of new technology has risen to the level of concern enough for ICAO to begin addressing the concept of uniformity through the development of Aviation System Block Upgrades (ASBU), in an attempt to encourage harmonization of new technology through the use of a "roadmap" to facilitate ANSP's, manufacturers and operators when upgrading their ATM system. The United States and the European Union have signed an agreement to work closely together in the development and deployment of their respective systems, to ensure that these systems are compatible to system users. However, there are several other States and ANSP's that are in the process of developing new upgraded systems that may or may not be compatible to what NextGen and SESAR are implementing. The Global Harmonization Panel will briefly describe what some of the major ANSP's worldwide are currently developing and implementing, and how they will achieve harmonization with other systems. Discussion will include the challenges and barriers to global harmonization of technology and the steps that are being taken - or need to be taken - to achieve a unified approach.

Moderator:

- **Nancy Graham**, *International Civil Aviation Organization*

Speakers:

- **Steve Bradford**, *Federal Aviation Administration*
- **Bob Humbertson**, *MITRE Corporation*
- **Neil Planzer**, *The Boeing Company*

Coordinator:

- **Pat Forrey**, *Forrey Associates*

9:45 am – 10:30 am
Exhibit Hall D & E

Coffee Break with Exhibitors sponsored by **URS-APPTIS**

10:30 am – 12 pm
Maryland Ballroom A/C

SESSION 7: How Long Should We Maintain Two NASs?

The promise of NextGen is a National Airspace System (NAS) that looks and acts very differently from today. While we are making progress, the NAS today still relies on ground-based systems while the NAS of tomorrow relies on satellite systems for navigation and surveillance. The inventory of performance-based procedures is growing and the deployment of satellite surveillance is underway but they exist alongside an extensive ground-based infrastructure. Panelists will discuss the challenges and potential solutions associated with transforming to NextGen in the face of continued reliance on our legacy ground-based infrastructure. How long should we maintain two NASs?

Moderator:

- **Elizabeth L. Ray**, *Federal Aviation Administration*

Speakers:

- **Joe DeVito**, *JetBlue*
- **Amr ElSawy**, *Noblis*
- **Trish Gilbert**, *National Air Traffic Controllers Association*
- **Jack Kies**, *Metron Aviation*
- **Steve Pennington**, *Department of Defense*
- **Craig Spence**, *Aircraft Owners and Pilots Association*

Coordinator:

- **Stephanie Fraser**, *Metron Aviation*

12 pm
Exhibit Hall D & E

Exhibit Hall Closes

12 pm – 1:45 pm
Maryland Ballroom B/D

Networking Luncheon (*Exhibitors Invited*)

2 pm – 3:15 pm
Maryland Ballroom A/C

SESSION 8: Future Aviation Advisory Committee

The Aviation Advisory Committee will provide information, advice, and recommendations to the Secretary of Transportation on ensuring the competitiveness of the U.S. aviation industry and its capability to address the evolving transportation needs, challenges, and opportunities of the global economy. The committee will assess fundamental changes in the following areas below, and identify the drivers of such change and the challenges and opportunities presented by industry developments:

- Addressing environmental challenges
- Balancing the industry's competitiveness and viability
- Ensuring a world-class workforce necessary for a robust aviation industry
- Ensuring safety in aviation
- Securing stable and sufficient funding for our aviation systems

Moderator:

- **Susan Kurland**, *Department of Transportation*

Speakers:

- **Sue Baer**, *NY/NJ Port Authority*
- **Dave Barger**, *JetBlue*
- **Ana McAhron-Schultz**, *Air Line Pilots Association*
- **Bill McGee**, *Travel and Aviation Consultant for Consumers Union*
- **Daniel McKenzie**, *Hudson Securities*
- **Anthony Willett**, *Future Aviation Advisory Committee*

Coordinator:

- **Paul Planzer**, *Air Traffic Control Association*

3:15 pm – 3:30 pm
Maryland Ballroom A/C

Closing Remarks:



56th ATCA Annual Conference and Exposition
Draft Agenda

Mr. Pete Dumont, *President and CEO*, Air Traffic Control Association
Monte Belger, *Chairman, Air Traffic Control Association, and Vice President of Industry Affairs,*
Metron Aviation

6 pm – 7 pm
Maryland Ballroom A/C

Glen A. Gilbert Memorial Award Reception
Sponsored by **The Boeing Company**

7 pm – 9 pm
Maryland Ballroom A/C

Glen A. Gilbert Memorial Award Banquet
Sponsored by **The Boeing Company**