

行政院及所屬各機關出國報告提要 系統識別號 C09006426
出國報告名稱：參加吉隆坡新聞媒体飛安資訊座談會報告
頁數：105 頁含附件：是

出國計畫主辦機關：行政院飛航安全委員會
聯絡人：鄧嵐嵐 電話：(02) 2547-5200 分機 175

出國人員姓名：任靜怡
服務機關：行政院飛航安全委員會
單位：
職稱：飛安官 電話：(02) 2547-5200

出國類別：1 考察2 進修3 研究4 實習 5 其他

出國期間：民國九十年十月十日至十月十二日
出國地區：馬來西亞吉隆坡

報告日期：民國九十年十月十八日

分類號/目

關鍵詞：國際航協 生化分類機 人為因素 飛安資訊 失事調查

內容摘要：(四百至五百字)

國際航協 IATA 有鑑於美國 911 事件後全世界航空界載客率負成長且戰爭險之高額保費及檢安問題造成航空市場雪上加霜，為提供並協助亞太地區新聞媒体於飛安相關訊息之採訪時能以專業公正不偏頗之立場報導，並居中協調各地區之媒体記者協助同業專業之飛安諮議，交換各地區對於飛安事件報導之共通及差異性，首次舉辦亞太地區記者舉辦飛安資訊座談會。

本次座談會第一天之專題包括最近熱門話題—如何利用新科技

簡化(生化分類機-Biometrics)並落實通關及安檢程序並推廣至全球各機場以共同及一致標準。此議題雖已於前國際航協香港發表之新聞稿中說明但仍造成東南亞地區之媒体極大之興趣，其他與飛安報導相關之議題包括國際飛安組織、飛安監理機構之職責、航空公司飛安管理責任、失事調查作業程序介紹、人為因素、如何由事件統計分析看失事預防之趨勢等，並由 IATA 邀請歐美地區資深媒体主編擔任本次座談會之顧問，針對媒体專業知識之培養及社會責任做引述。此部份亦是本次會議中最具資訊分享價值者。

第二天議程則以馬來西亞機場、航管、馬航訓練中心及馬國對 CNS/ATM K 之未來規劃說明為重點，惟限於出差日期未及參與。

綜觀國際航協此次會議之規劃及參與媒体之發言，可發現中外媒体對飛安環境之了解深度、意願及專業有別，大會舉辦座談會之立意良好，惟如何針對不同聽眾之間需求設定議程內容建議可作為下次座談會修正方向，另未來是否有必要對國內媒体記者舉辦類似座談會亦值得本會評估。

行政院及所屬各機關出國報告審核表

出國報告名稱: 參加國際航協舉辦第一屆飛安資訊座談會報告

出國計畫主辦機關名稱: 行政院飛航安全委員會

出國人姓名: 任靜怡

職稱: 飛安官

服務單位: 行政院飛航安全委員會

出國計畫主辦機關審核意見:

- 1. 依限繳交出報告
- 2. 格式完整
- 3. 內容充實完備
- 4. 建議具參考價值
- 5. 送本機關參考或研辦
- 6. 送上級機關參考
- 7. 退回補正, 原因:
 - (1) 不符原核定出國計畫
 - (2) 以外文撰寫或僅以所蒐集外文資料為內容
 - (3) 內容空洞簡略
 - (4) 未依行政院所屬各機關出國報告規格辦理
 - (5) 未於資訊網登錄提要資料及傳送出國報告電子檔
- 8. 其他處理意見:

層轉機關審核意見:

- 同意主辦機關審核意見
 - 全部 部份 _____ (填寫審核意見編號)
- 退回補正, 原因: _____ (填寫審核意見編號)
- 其他處理意見:

赴馬來西亞吉隆坡參加國際航協舉辦之第一屆 新聞媒体飛安資訊座談會報告

目 錄

壹 前言

貳 議程摘要

參 會議內容摘要

肆 參會心得與建議

伍 附錄

壹 前言

國際航協 IATA 有鑑於美國 911 事件後全世界航空界載客率負成長且戰爭險之高額保費及檢安問題造成航空市場雪上加霜，為提供並協助亞太地區新聞媒體於飛安相關訊息之採訪時能以專業公正不偏頗之立場報導，並居中協調各地區之媒體記者協助同業專業之飛安諮議，交換各地區對於飛安事件報導之共通及差異性，首次舉辦亞太地區記者舉辦飛安資訊座談會。

本次座談會第一天之專題包括最近熱門話題—如何利用新科技簡化(生化分類機-Biometrics)並落實通關及安檢程序並推廣至全球各機場以共同及一致標準。此議題雖已於前國際航協香港發表之新聞稿中說明但仍造成東南亞地區之媒體極大之興趣，其他與飛安報導相關之議題包括國際飛安組織、飛安監理機構之職責、航空公司飛安管理責任、失事調查作業程序介紹、人為因素、如何由事件統計分析看失事預防之趨勢等，並由 IATA 邀請歐美地區資深媒體主編擔任本次座談會之顧問，針對媒體專業知識之培養及社會責任做引述。此部份亦是本次會議中最具資訊分享價值者。

第二天議程則以馬來西亞機場、航管、馬航訓練中心及馬國對 CNS/ATM K 之未來規劃說明為重點，惟限於出差日期未及參與。

綜觀國際航協此次會議之規劃及參與媒體之發言，可發現中外

媒体對飛安環境之了解深度、意願及專業有別，大會舉辦座談會之立意良好，惟如何針對不同聽眾之間需求設定議程內容建議可作為下次座談會修正方向，另未來是否有必要對國內媒体記者舉辦類似座談會亦值得本會評估。

貳 議程摘要

一 主辦單位致歡迎詞—

Dato 'Md Nor Managing Director, Malaysia Airlines

Barbara D'Amato-- Progect Manager,IATA

二 運輸安全釋義

William Gaillard --Director Corporate Comms, IATA

三 由製造廠的立場看運輸安全

Wilson Nishida—Gen Manager Market-Embraer

四 談安全與法規

Capt.Roger Mulberge-- Regional Officer,ICAO Bangkok

五 談人為因素與組員資源管理之演進

Prof.Robert Helmreich,--Univ. of Texas Human Factor Proj

六 如何由失事統計分析看飛安趨勢及其改善之道

Wayne Rosenkrans—Flight safety Foundation

七 由航空公司之立場及責任意看飛行安全

Capt.Nawawi Awang—Senior General Manager, Flt Ops, Malaysia Airlines

八 淺談到失事調查規則摘要

Michel Salmon—Director of Study, French Institute for Aviation Safety

九 資深媒体人飛安專訪經驗談

Michel Salmon—Aviation Safety Alliance

Tom Ballantyne—Chief correspondent, Orient Aviation

Pierre Condom—Air & Cosmos

'Yoshitomo Aoki—Executive Editor, Air world

Pierre Sparaco—Avation week & Space Technology

George Jeseeph—Business Times

十 飛航概論

Ken Morton—Director of Communications--Boeing

十一 機務維修概論

Airlin Roselan Ismail—General Manager/MM/Malaysia es

十二 **CNS/ATM** 簡介

Tony Laven—Director Infrastructure-Asia/Pacific,IATA

十三 航站策略規劃

參 會議內容摘要

(一) IATA 運輸安全資訊交流計劃之源起

發生不安全的重大飛安事件時，處於第一線的新聞媒體如何取得正確、快速、專業、公正的資訊讓大眾得到知的權利則至為重要。IATA 在推動民航運輸相關之教育訓練一直不餘遺力，而安全觀念之建立則是推動民航業蓬勃發展之基礎。

IATA 為了讓媒體對運輸安全相關議題深入瞭解，推廣促進安全之科技新知、程序及法規，同時讓媒體記者能於重大飛安事件發生時易於找到諮詢採訪之專業對象，而最重要的是創造使製造業者、使用者、及媒體間樂於溝通的環境，所謂的運輸安全資訊交流計劃因而開始。

該計劃未來除了建立網站，登錄各行各業新聞發言人，失事及飛安相關機構之專家通訊錄，建立飛安基本資料庫—包括失事統計分析及媒體可能查詢之安全相關議題，更集合了對飛安具專業之後歐美資深記者成立諮詢委員會提供線上問答。

依據 IATA 資深對外發言人引述其近期發表之 IATA 新聞重點，近期 911 事件不但須造成美國航空業重創，戰爭險之理賠款問題、安檢問題更改造成全世界各機場及消費者恐慌。

各國因 911 事件使用較嚴謹之安全檢程序標準不同亦步亦趨造

成登機延誤及旅客不便，各大航空公司面臨重大家虧損及裁員合併壓力。全世界航空市場載客率隨之下降價，因此如何渡過經濟及航空界黑暗期，擬訂單開源節流計劃並列有過渡期心理準備，將是全世界業者之共同努力爭目標。

有鑑於此，IATA 針對 911 後已見成立之世界區域性的檢安改善良研究委員會，除了針對相關議題提供改善意見外，並檢視全球對此之因應做法，要求提供一致標準。在戰爭險部份建議各國主管官署在保險界達成共識前先伸出援手。此外，自由市場開放競爭及聯營國際化，亦將使雙方互贏，旅客得利。聯營合併及 CODE SHARE 已是大勢所趨，各方得利亦將使成本下降及旅客回流。

IATA 在其他們提昇安全的做法上，包括改善檢安，CFITALAR 及拉丁美洲區域安全之改善、人為因素研究專題，CNS/ATM、ATC 及機場設施及第噪音改善、協調時間帶、減少空域擁塞等都是 IATA 不遺餘力的持續工作，此外針對新聞媒體之飛安專業教育訓練亦將納入未來 IATA 投入的工作之一，以達成 IATA 之安全策略目標，這也就是此次 IATA 舉辦會議的目的。

(二)現今運輸安全之重點—機場檢安之改善及面貌辨識系統之引進

安全與檢安之分界線亦一直是具爭議產及有灰色地帶，安全泛指一般商業運輸中與安全有關之事項，而檢安則泛指不法侵入、犯罪行為如劫機、爆裂物、炸彈威脅等。

911 事件後，檢安成為消費大眾關切的焦點，學者專家亦紛紛提出許多改善建議，包括如何加強入境犯罪組織查緝，加強駕駛艙門結構，使用駕駛艙錄影監視器，空中保警之使用等，而其中經 IATA 及國民航組織認為可能最具效率及最可行的則是面貌辨識系統之引進。

所謂面貌辨識系統(BIOMETRIC)是由 ICAO 及 IATA 二年前邀集民航主管航空公司等相關單位參與研發，此系統是一項新生化科技，主要是結合面部辨識、指紋、掌紋，將面部辨識資料輸入護照，登機證甚至信用卡，並結合國際犯罪組織，將此資料透過攝影機與已儲存資料庫中之數據比對，此舉將可簡化通關、移民及海關手續，使其在無安全顧慮下增加效率。

在機場內裝設此系統，視機場規模可由二架至二十架至一百架不等。由於面部辨識的相容性高於面分之八十五，因此成為生化科技辨識人基本特徵之最佳選擇。

目前 IATA 與英航及 Heathrow 機場之組員、員工約二千人合作預

計於今年二月起試行六個月，至於新加坡、日本、中國大陸亦均已表達使用此新科技之興趣。

此工具如用於反制恐怖主義預期將有成效，因為能成功的與國際犯罪組織連線警示不良分子入關及登機意圖，持有此證之旅客可迅速通關，否則必須重返繁瑣之傳統登機程序。

目前此系統仍在測試中，且有待 ICAO 為此設定標準及指導要件，包括登記和加簽處理程序，備用系統，儲存需求，操作性能，旅客之共同觀點等同時加速機場符合 2000 年機場改進法中對機場員工實施指紋背景查核之規則。

(三)人為因素組員資源管理及系統安全

人為因素專家，Dr. Robert L Helmreich 對人為因素及組員人為誤失之防範而積極引進 LOSA(飛行線上查核)計劃，將一般組員發生人為誤失之現象追溯到系統因素有，包括了技術操作及系統運作所發生之缺失，其中文化因素、環境、設計、自動化、標準、訓練、線上支援，均為受過 LOSA 查核訓練之資深人員於線上查核不具名登錄後輸入錯誤類分析之重點項目。

Dr. Helmreich 另外對安全管理中如何運用系統化管理，由避免錯誤 → 減少誤失 → 錯誤管理—處理航機實發狀況等概念介紹給媒

體，據觀察如果與會者需先對人為誤失及錯誤管理已有概念，則可由此彙整出完整的系統管理概念，包含由知道人類操作限制、潛在風險及誤失管理的原則，最後經由訓練加強組員對航機突發狀況之預期及處理經驗。

第一代傳統 CRM 觀念已逐漸演進至第五代，第六代之 CRM 已逐漸成形，也就是藉由誤失管理將以往 CRM 之觀念訓練做為誤失管理之有效工具。CRM 計劃不再是紙上談兵，而是提供工具、技巧及具體數據來做有效的誤失管理。

(四)失事調查

法國飛安訓練機構(French Institute For Aviation Safety)規定及針對失事調查規則向與會媒體做概括介紹。包括介紹芝加哥公約 Article 26 及 ICAO Annex 13 對失事調查之法源及演進，包括對相關定義如失事、重大意外、事實報告結論、分析、改善建議，專業用語如(使用人、所有人、註冊國、廠商、主任調查官.....)均做完整介紹，並引用實例深入淺出的讓與會者明瞭在不同情況、地點、發生地、國籍，失事後在事件調查過程中需要參與調查之單位，簡報中雖未結合多媒體、VCR 及黑盒子、模擬動畫、實驗室等有關失事調查程序、規定及裝備做深入介紹，但

據觀察亞太地區媒體記者對失事調查規則似乎並未被列入其關注及進修之重點。由會議發言看來，專業或有興趣之媒體仍為少數。

(五)資深媒體安全討論 資訊交流篇

在第一天各專項報告最後，由大會新成立之運輸安全資訊交流計劃諮詢委員會小組成員之歐、美、日資深安全討論專家列席為與會媒體釋疑，各國媒體詢問之重點不外乎法律訴訟爭議，如何取得快速正確資訊、飛安專家之聯絡通訊管道、如何取信於眾、如何避免過快下結論、如何避免泛政治化及不受利益團體影響、如何以公正角度報導、飛安專業如何建立等。

在座之媒體因所處環境不同，專業水準亦各有差異，綜觀亞太地區似乎與歐、美專業媒體水準仍有差距。且亞太地區之記者業務調動較頻繁，對相關資料彙整觀念不足，相互間聯絡亦少，造成對事件報導仍較偏向即時性，新聞性及消費者導向及報導式為主，對專業性討論及深入問題尋找解決方案之報導方式仍屬少數。

IATA 承諾未來將增加此方面諮詢及網路資訊之協助。波音公司亦鼓勵記者參與相關訓練，與會航空業者代表亦鼓勵媒體利用平時多充實及深入了解民航生態、相關安全議題及其運作，俾便事件發生時

更具專業性報導。

肆 參會心得與建議

IATA 以國際航協定位推動國際運輸之發展，對媒体於飛安報導所扮演之立場及角色具影響力，惟飛安觀念及專業之建立需要平時及長時間多方面之資訊彙集及具國際觀，能觀摩國際做法後套用地區性文化及習慣之能力，所謂經驗之累積則應保持長期固定專職工作方可能對區域性之問題有深入了解。

IATA 在提供專業飛安資訊訓練前，應先區隔對象之專業水平，包括參會者層次及經驗之百分比，對與會人員之背景調查，以及評估舉辦訓練之目的是以提供初訓者正確飛安觀念、通材一般概念、或進階專業訓練。至於對象亦應區隔地方性或區域性以免因涵蓋太廣而失去主要客戶訴求。

有關議程規劃，二日之飛安資訊座談會於上述與會對象確定後即應規劃專題之議程重點及優先次序，議程如確立為建立整體飛安觀念則應先審查以往及近期區域性之關鍵性議題，如著重於導正報導偏頗或專業不足，則應就此相關議題發揮。

如果期望非專家的媒体經由短期訓練即可以對飛安議題有所得，較不可行。如何由主辦單位做循序漸進訓練成長期規劃，針對不同議題邀請專家則應屬可為。

主辦單位對主講人之內容亦應予以規劃及審查，而專題主講人應先就與會者之需求訪查，避免文宣及太技術性之簡報，並應揣摩媒体需求及立場，就其專業做深入淺出之說明。

由本次座談會與會者之討論看來，媒体記者以往確有資訊不足及得不到專業諮詢之困擾，經由本次會議 IATA 承諾未來可提供相關之協助並陸續舉辦類似訓練型座談會。

本次會議雖係初次辦理，除上述改進建議外成效尚稱良好，且協辦單位亦達到宣傳之目的。參會前個人曾徵詢國內媒体對舉辦類似訓練之看法，另與國際航協洽詢辦理所需經費如以上本次會議規模加入業者贊助則花費約需美金伍仟元左右，未來本會是否有必要為國內媒体及業者公關代表舉辦類似座談會，擬於評估後考量納入明年度業務計劃預劃案。

伍、附 錄

附件一

第一屆新聞媒體飛安資訊座談會專題報告目錄

1. IATA STATEMENT-FULL RECOVERY OF AIRLINES IS ESSENTIAL TO GLOBAL ENCONOMY—

GENEVA 25 SEPTEMBER 2001

2. IATA NEWS—TIME TO BEGIN RECOVERY-

IATA PIERRE JEANNIOT

3. .SAFETY AND THE REGULATOR

CAPTAIN ROGER MULBERGE

4.HUMAN FACTOR, COCKPIT RESOURCE MANAGEMENT, AND SYSTEM SAFETY

ROBERT L HELMREICH, PHD, FRAES

5.SHAPING SAFETY STRATEGIES WITH AIRLINES ACCIDENT DATA

WAYNE ROSEKRANS, EDITOR FLIGHT SAFETY FOUNDATION.

6.SAFETY AND ACCIDENT REPORTING INVESTIGATION

TOM BALLANTYNE

CHIEF CORRESPONDENT, ORIENT AVIATION



FULL RECOVERY OF AIRLINES IS ESSENTIAL TO GLOBAL ECONOMY

Geneva
25 September 2001

The world air transport industry is in crisis. Recent tragic events in the United States are, at least in the short term, fundamentally reshaping attitudes to travel. In response, airlines have slashed operations and, regrettably, reduced staff. At the same time, they are facing heightened security and insurance costs.

Air transport is the life-blood of the global economy - from travel and tourism to "just in time" delivery. What economic sector does not rely on air transport today? The total economic output of the air transport industry is over US\$1.3 trillion - equivalent to the GDP of the U.K. or France.

Airlines in different regions of the world are already in discussion with their national and regional authorities. Today, the International Air Transport Association, representing 275 of the world's airlines, calls on governments to take urgent action in the face of this unprecedented crisis.

The U.S. Government has already taken some action in the form of cash compensation and loan guarantees to assist in meeting the U.S. airlines immediate financial requirements. As a result of the September terrorist attacks, other governments must also examine what measures would be appropriate to assist the non-U.S. airlines aimed at offsetting the direct impact of the current industry crisis.

A key partner of the airline industry is the insurance market, which itself is facing unprecedented financial challenges in light of the recent events. IATA urges governments to work with the airlines and the insurance market to ensure that essential, adequate insurance requirements remain available to the industry. Airlines only operate with the right insurance.

Recent tragic events have underlined the responsibility of states to ensure public security and safety. Existing security is being reinforced, but new measures are required involving technology and intelligence. Airlines are committed to work with government agencies in this task.

Around the world, governments and airlines regularly discuss a wide range of significant - but not always urgent - regulatory issues addressing different aspects of airline operation. IATA urges governments to set these initiatives aside to allow the entire aviation community to focus on the immediate challenges.

One of the main cost components of the airline industry is fuel. While reductions in airline operations will have a short-term impact on fuel demand and price, fuel purchases represent nonetheless US\$39 billion in cost at today's prices. IATA calls on all oil producing states and companies to urgently reduce fuel prices to ease pressures not only for the airline industry, but all sectors of the world economy.

Airports and ATC providers around the world are also facing a changed market outlook and financial expectations. Their unique position provides greater financial stability than is available to the airline community. IATA urges the airports, ATC providers and other industry suppliers around the world to urgently adjust their costs in line with the expected reduction in traffic, and take whatever measures possible to ease the financial pressures on the airline community.

IATA and its members remain committed to an increasingly liberalised, global market where airlines compete openly and fairly to meet customer demand. The current crisis threatens not only this goal, but also the industry's ability to drive the world economy. However, this goes beyond economics. Air transport is the vehicle which enables individuals from around the world to get together for business and social purposes, helping to bridge the differences that sometimes threaten to divide us. Airlines are important factors in fostering conditions that uphold peace.

Could this have been one of the reasons why our industry was cruelly targeted?

How governments will respond in the coming days will shape more than just the future of the airline industry.

Pierre J. Jeannot
Director General & CEO, IATA



Chief Executive Brief

From Pierre J. Jeannot, O.C.

Director General and CEO

11 September 2001 will always remain engraved on the minds of all of us as the darkest day in the history of civil aviation – a day when terrorists used civil airliners to destroy thousands of innocent lives.

The grief, confusion and uncertainty that followed those tragic events reverberated throughout the world and will continue to do so for some time. The impact on our industry, our customers and our employees was immediate and extremely harsh - sharply reduced demand for our services; unprecedented delays at airport security checkpoints; rapidly escalating costs – all of which have created tremendous additional pressure on an already frail operating environment.

Several major airlines are already experiencing severe financial difficulties – and more could well follow. In the light of increasing pressures on both airlines and agents, IATA has reinforced the surveillance of the various settlement systems and introduced early-warning systems and procedures in each BSP and CASS office.

A full and rapid return to normal operating conditions is crucial to our industry – and also to the recovery of the global economy. All sectors of this great industry – airlines, international and regional carrier associations, service providers, and suppliers – must work together to restore public confidence and ensure an early return to 'business as usual'.

INDUSTRY SCENARIO

Inevitably, traffic slowed dramatically in the last half of September, particularly for US carriers who experienced reductions in revenue passenger kilometres of approximately -35% on international services and -35% on domestic services. Based on a limited sample of other carriers, traffic in the rest of the world declined by approximately -20-25% in the first week following the attack; it had already recovered to around -5% by the following week.

The longer term impact is impossible to predict with any accuracy at this moment in time. However, the latest information indicates that we can expect reductions in capacity on international scheduled services averaging 10-20% during the next three months.

The financial implications are likewise difficult to predict in the face of determined action by air-

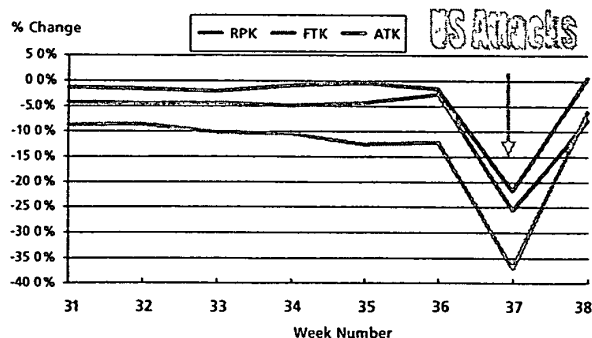
lines to cut costs in response to dwindling revenues. To the end of August, the global industry was already estimated to show a net loss on international services of around USD -3 billion. Based on a global reduction of 15% in capacity and traffic from now to year-end, the latest estimates (central scenario) indicate a loss of around USD -7 billion for 2001 on international services, and well over USD 10 billion for the industry globally.

On a more positive note, a recently (19-22 September) conducted IATA survey of corporate business travellers found that two-thirds of corporate business travellers said they had not changed their travel plans following the attacks. 18% had delayed travel plans and only 8% had actually cancelled travel.

Contact: Peter Morris, Chief Economist

TRAFFIC & CAPACITY TRENDS

International Scheduled Services · Year on Year Changes



Details for 15 main EU carriers only

Source: IATA Analysis

SECURITY WITHOUT BORDERS

Ensuring that additional measures to strengthen security are practical, harmonised internationally and applied globally - leading to real improvements in security - is fundamental to our industry's ability to resume effective and efficient operations.

~~A "Global Aviation Security Action Group (GASAG) has been set up by IATA to co-ordinate measures to achieve an effective worldwide security system. This Group comprises security experts from the regional carrier associations, Airport Council International (ACI), Airbus, Boeing, the International Federation of Airline Pilots Association (IFALPA), and IATA - an unequalled source of collective industry knowledge and expertise.~~

INSURANCE

Passenger and hull risk coverage is available but at exorbitant cost. This and the issue of war risk for third party coverage, for airlines and service providers are possibly the most serious problems facing our industry today.

~~Most States have provided guarantees for airlines in excess of the USD 50 million third party war risk to cover the differences between insurance available in the market and legal requirements. However, a recent IATA-led meeting of concerned parties has concluded that such guarantees, while encouraging, do not adequately meet our industry's needs. A paper asking ICAO to convene a special working group focussing on this issue has been submitted to the Assembly.~~

Despite rising pressures on the insurance community, we have yet to see any lowering in insurance costs - or moves to extend war risk coverage to our service providers. I will be meeting personally with aviation insurers next week to try to bring this matter to an acceptable conclusion.

Contact: Tony Kelly - Vice President, Infrastructure Economic Strategy

Members of GASAG have provided input to the Rapid Response Teams established by the U.S. DoT and the FAA to develop and implement internationally recognized, harmonized - and effective aviation security measures. Full support and assistance has also been offered to similar initiatives launched by the European Commission and ECAC, and to other government and industry programmes being developed around the world.

A paper outlining IATA's position and recommendations for action by States has been submitted to the 33rd Assembly of ICAO currently underway in Montreal.

Contact: Günther Matschnigg, Vice President, Operations & Infrastructure

PUBLIC AFFAIRS

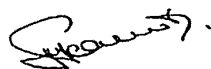
IATA has had extensive contact with the world media since the attack, providing up-to-date information on the actions - and concerns - of the international aviation community.

A comprehensive public relations campaign is underway in collaboration with the airlines and a wide range of partners in the travel and tourism industry, targetting Governments, the travelling public and others involved in international civil aviation. Communications have been coordinated with our PR contacts throughout the airlines, designed to restore the confidence of the travelling public, assist the industry to regain lost traffic, and ensure a quick return to financial viability.

The strength - and ultimate success - of our campaign will largely depend on all airlines and industry partners delivering a consistent message to the same target audiences.

Contact: Kevin Dobby, Vice President, Member Relations & Communications

The top priorities of this industry have always been safety and security. Each of us has an over-riding responsibility to the travelling public - and to the millions of people whose livelihood depends on the survival of this industry - to do whatever it takes to provide the confidence and the vision civil aviation needs to resume its essential, vital role



INTERNATIONAL AIR TRANSPORT ASSOCIATION



AVIATION INFORMATION AND RESEARCH

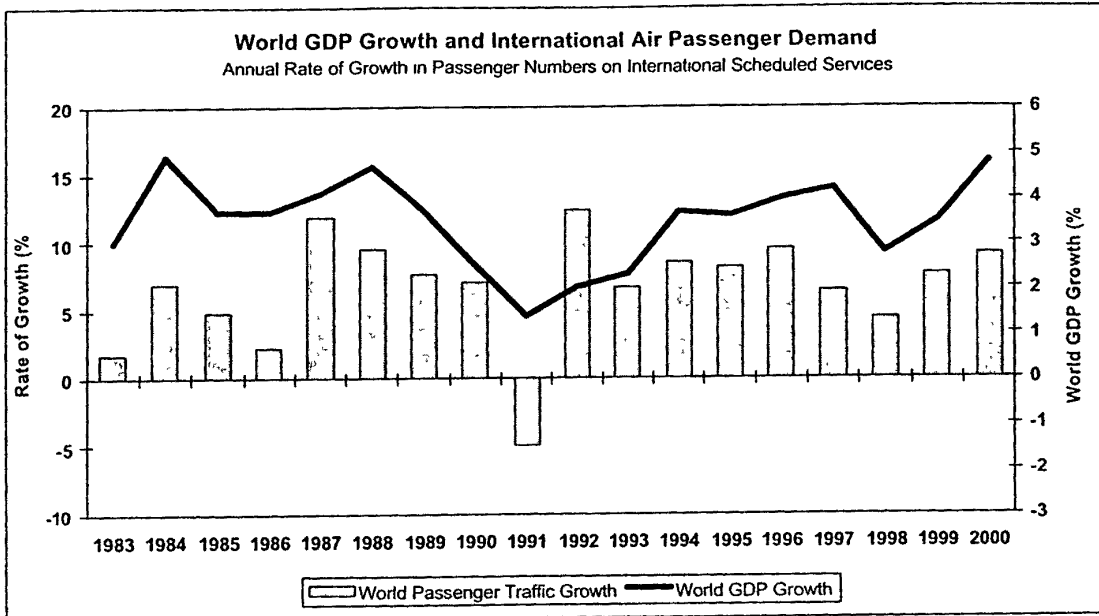
September 2001 Industry Briefing

Recent events in the United States have generated a huge volume of enquiries regarding the potential impact of the crisis on the global aviation industry. This information pack is designed to answer many of the questions that IATA Aviation Information & Research has been asked over the last few days. It includes:

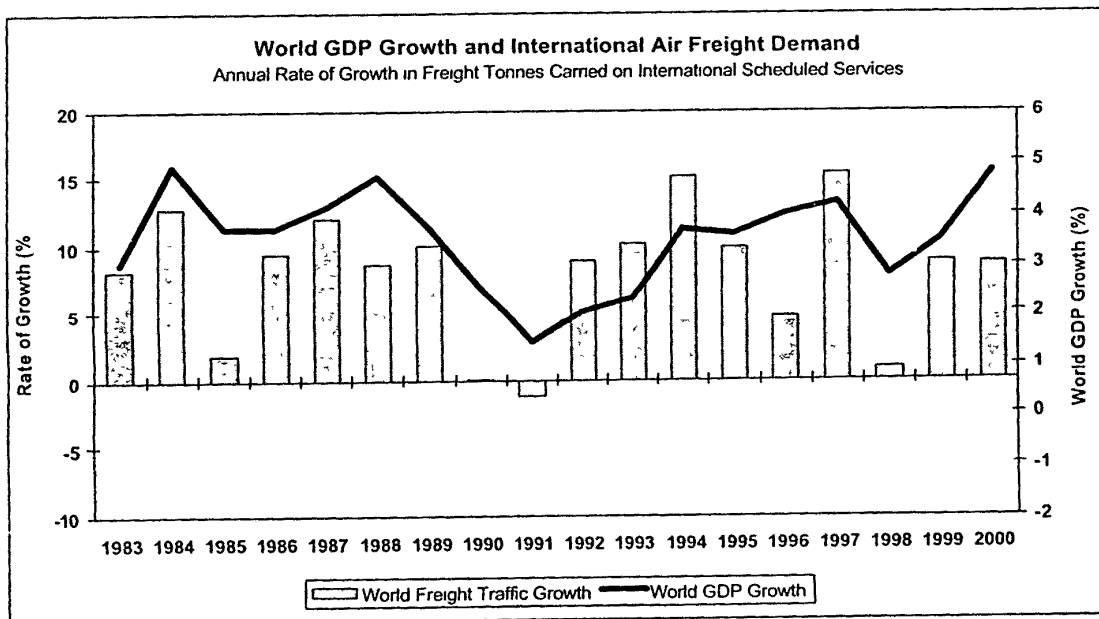
- The Correlation Between GDP Growth and International Air Traffic Demand Page 2
- The Impact Of The Gulf War On International Air Traffic Growth Page 3
- Industry Financial Trends, 1985-2000 Page 5
- IATA Employee Trends, 1985-2000 Page 6
- Appendix 1: World GDP/Air Traffic Growth Rates, 1983-2000 Page 7
- Appendix 2: Monthly Passenger/Freight Traffic Growth Rates, 1990-1991 Page 8
- Appendix 3: Industry Operating Revenues/Results, 1985-2000 Page 9
- Appendix 4: IATA Member Airline Employee Trends, 1985-2000 Page 10
- Appendix 5: Glossary of Terms & Definitions Page 11

If you have any queries relating to the contents of this document or require any further information from IATA Aviation Information & Research, please e-mail stats@iata.org

The Correlation Between GDP Growth and International Air Traffic Demand

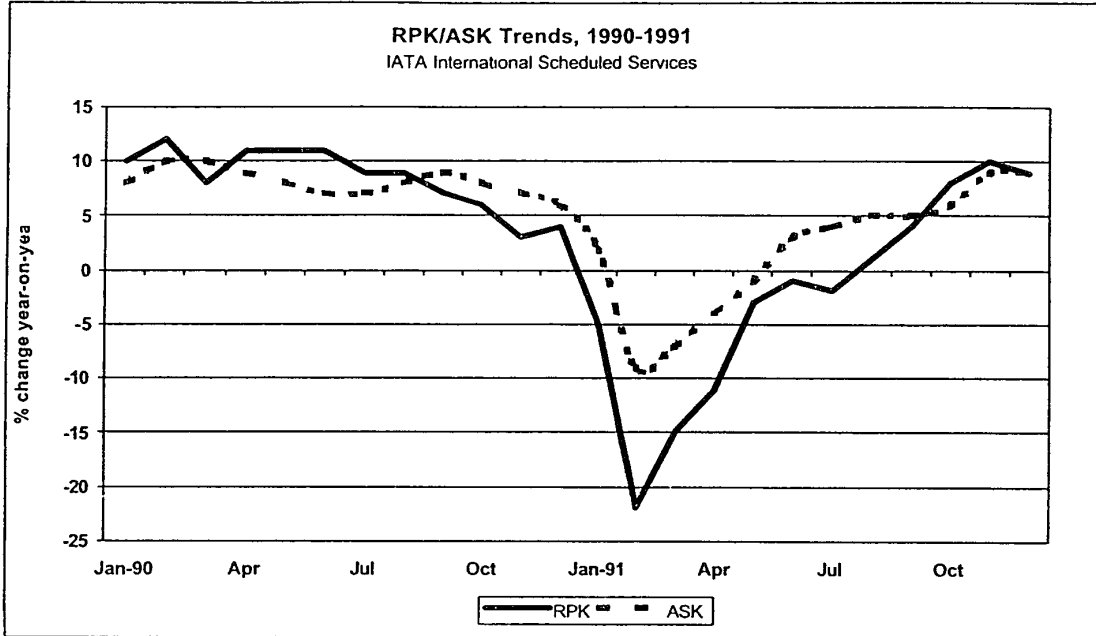


Source ICAO, IMF

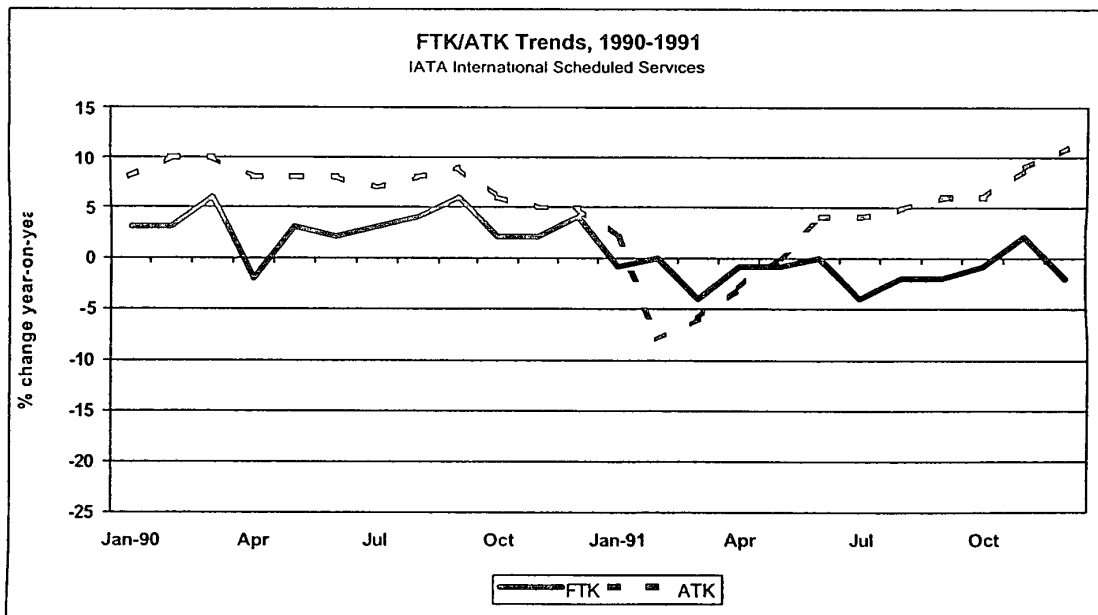


Source ICAO, IMF

The Impact Of The Gulf War On International Air Traffic Growth (page 1)

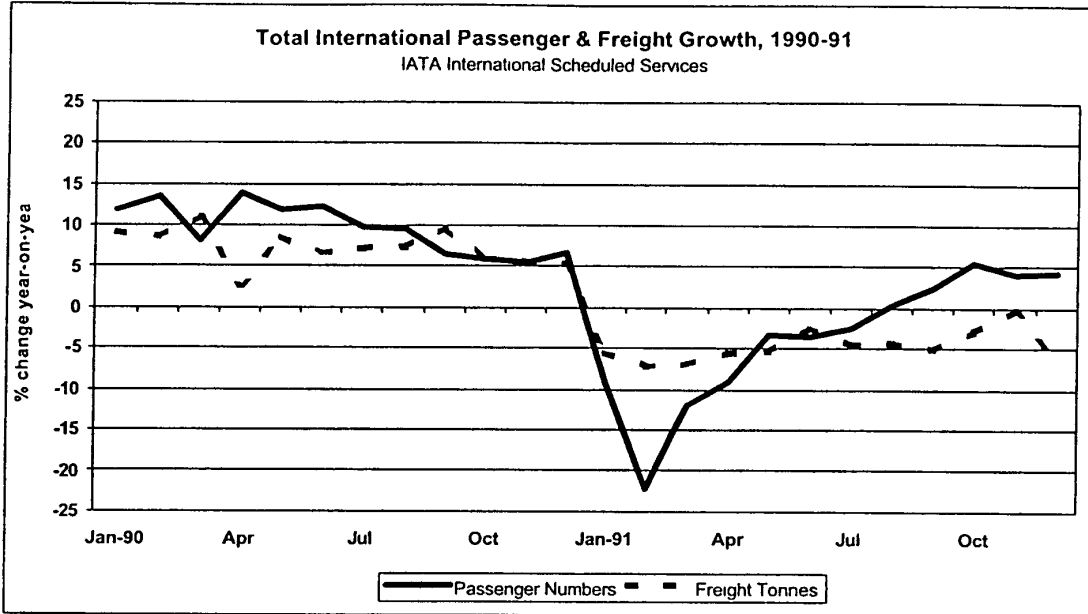


Source IATA Monthly International Statistics (MIS)

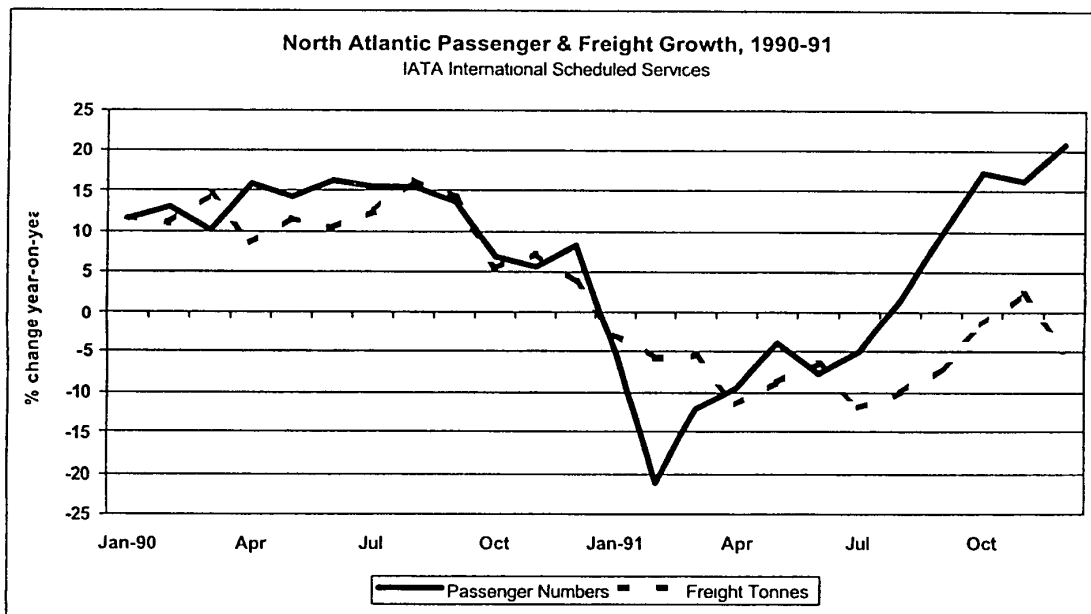


Source IATA Monthly International Statistics (MIS)

The Impact Of The Gulf War On International Air Traffic Growth (page 2)

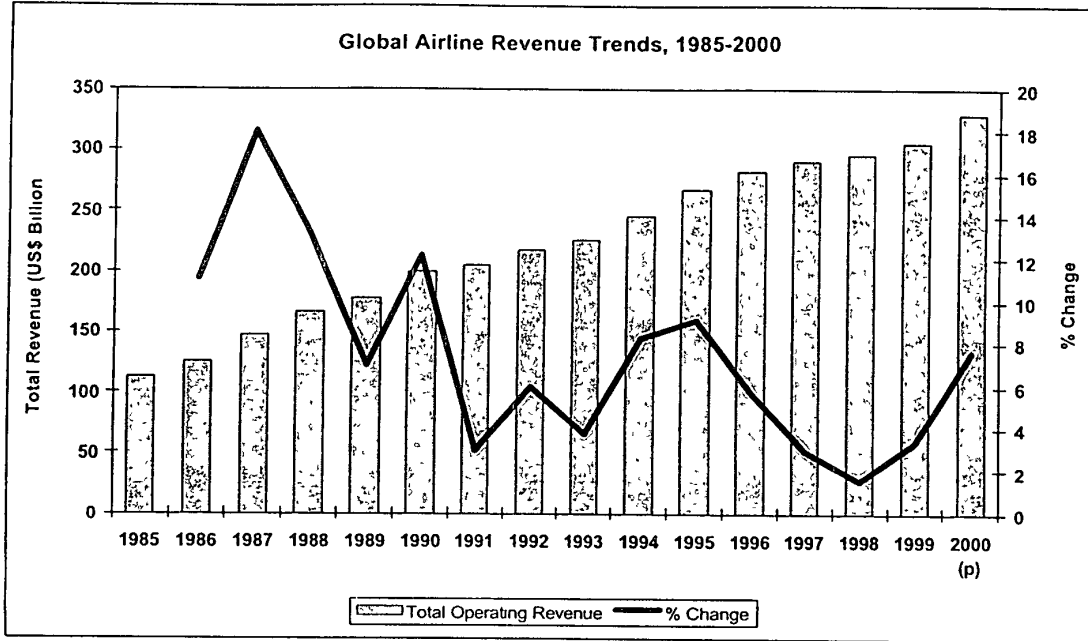


Source IATA Origin-Destination Statistics (ODS)

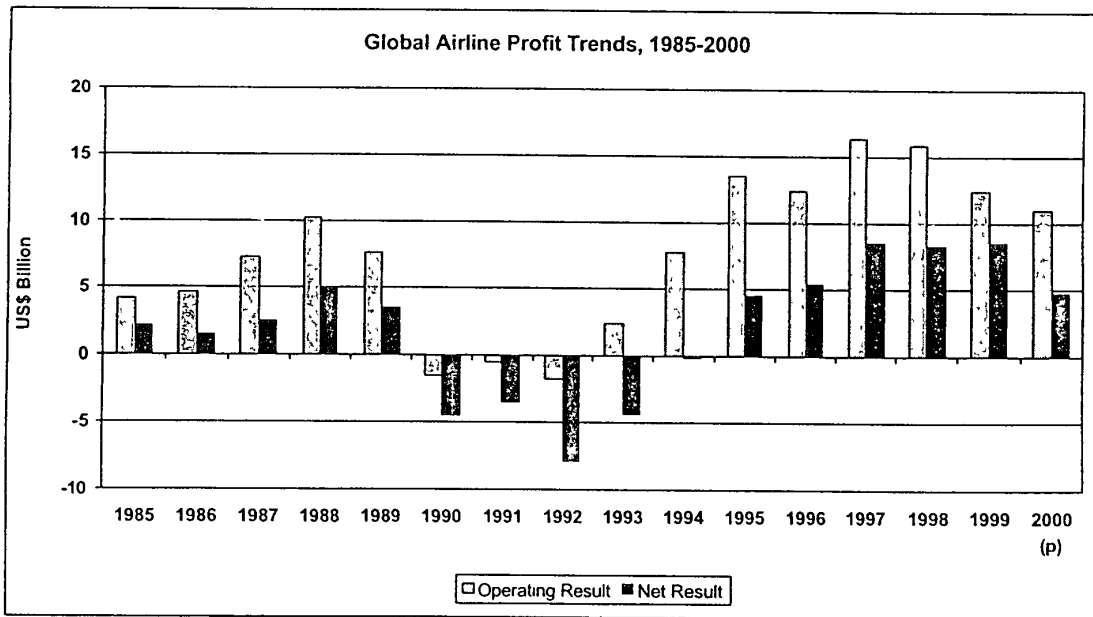


Source IATA Origin-Destination Statistics (ODS)

Industry Financial Trends, 1985-2000

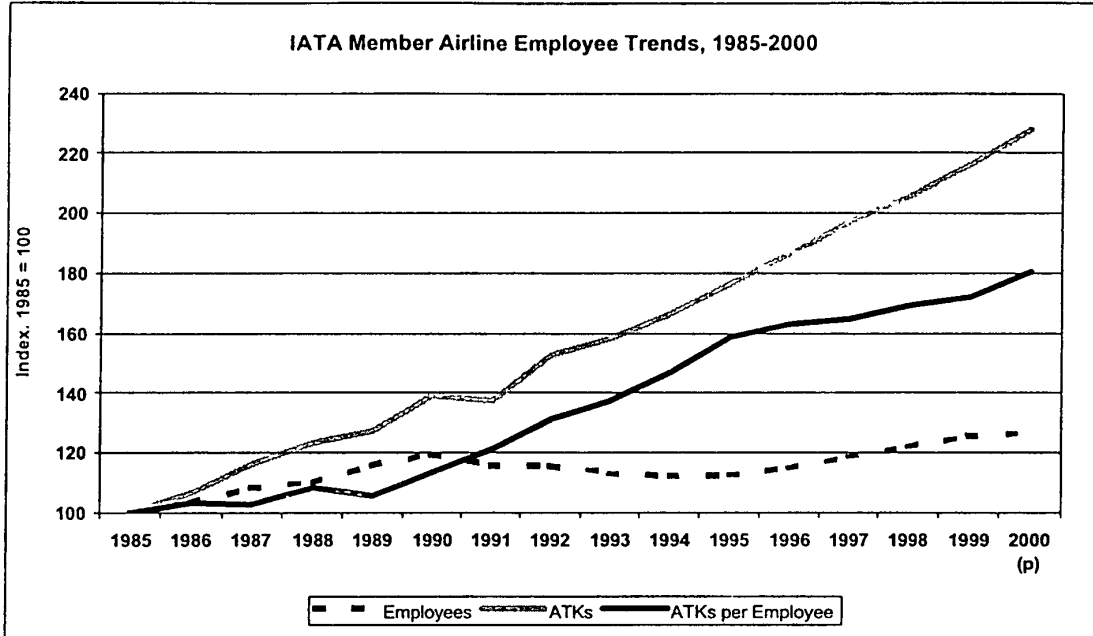


Source ICAO



Source ICAO

IATA Employee Trends, 1985-2000



Source: IATA "World Air Transport Statistics"

Appendix 1
Global Economic and Air Traffic Indicators

	World GDP Growth ⁽¹⁾	International Air Passenger Traffic Growth ⁽²⁾	International Air Freight Traffic Growth ⁽²⁾
1983	3.0	1.8	8.3
1984	4.9	6.9	12.8
1985	3.7	4.9	1.9
1986	3.7	2.1	9.5
1987	4.1	12.1	12.1
1988	4.7	9.5	8.7
1989	3.7	7.8	10.1
1990	2.5	6.9	0.1
1991	1.4	-5.0	-1.3
1992	2.0	12.8	9.0
1993	2.3	6.7	10.2
1994	3.7	9.0	15.1
1995	3.6	7.8	10.0
1996	4.0	9.6	4.6
1997	4.2	6.3	15.4
1998	2.8	4.5	1.0
1999	3.5	6.8	8.9
2000	4.8	10.0	8.9

⁽¹⁾ IMF World Economic Outlook June 2001

⁽²⁾ ICAO

Appendix 2
Monthly Passenger/Freight Traffic Growth, 1990-1991

	Total International Traffic Growth (%)		North Atlantic Traffic Growth (%)	
	Passenger Numbers	Freight Tonnes	Passenger Numbers	Freight Tonnes
Jan-90	11.9	9.2	11.6	11.7
Feb	13.5	8.6	13.1	11
Mar	8.2	11	10.1	14.6
Apr	13.9	2.6	16	8.5
May	11.8	8.5	14.3	11.6
Jun	12.2	6.6	16.3	10.4
Jul	9.8	7.2	15.6	12.5
Aug	9.6	7.4	15.6	16.3
Sep	6.6	9.7	13.6	14.2
Oct	5.9	5.9	6.8	5.5
Nov	5.4	5.6	5.6	7.3
Dec	6.8	5.3	8.3	3.9
Jan-91	-9.1	-5.6	-5.1	-2.9
Feb	-22.1	-7.2	-21.2	-5.9
Mar	-11.9	-6.9	-12	-5.6
Apr	-9	-5.6	-9.3	-11.5
May	-3.3	-5.4	-4.1	-8.7
Jun	-3.5	-2.4	-7.8	-6.5
Jul	-2.6	-4.6	-5	-11.9
Aug	0.4	-4.3	1.7	-9.9
Sep	2.3	-5.1	9.7	-7.2
Oct	5.5	-2.9	17.3	-1.6
Nov	4	-0.2	16.4	2.5
Dec	4.3	-6.2	20.8	-4.8

Source: IATA Origin-Destination Statistics

**Appendix 3
Industry Financial Trends, 1985-2000**

	Operating Revenues (US\$ Million)	% Change	Operating Result (US\$ Million)	Net Result (US\$ Million)
1985	112,200		4,100	2,100
1986	124,600	11.1	4,600	1,500
1987	147,000	18.0	7,200	2,500
1988	166,200	13.1	10,200	5,000
1989	177,800	7.0	7,600	3,500
1990	199,500	12.2	-1,500	-4,500
1991	205,500	3.0	-500	-3,500
1992	217,800	6.0	-1,800	-7,900
1993	226,000	3.8	2,300	-4,400
1994	244,700	8.3	7,700	-200
1995	267,000	9.1	13,500	4,500
1996	282,500	5.8	12,300	5,300
1997	291,000	3.0	16,300	8,550
1998	295,500	1.5	15,900	8,200
1999	305,500	3.4	12,300	8,500
2000 (p)	328,700	7.6	11,000	4,700

Source: ICAO

Appendix 4
IATA Member Airline Employee Trends, 1985-2000
 (Index 1985=100)

	Employees	Available Tonne-Kilometres (ATKs)	ATKs per Employee
1985	100 0	100 0	100 0
1986	103.4	106 6	103 0
1987	108.1	116 3	102 8
1988	110 0	123 4	108 0
1989	115 6	127 3	105 6
1990	119.7	138 9	113 0
1991	115 6	137 4	121 2
1992	115.7	152 2	130 9
1993	113 0	157.8	137.2
1994	112.2	166.2	146 6
1995	112.4	176 8	158 7
1996	114 7	186 7	163 0
1997	118 6	197 4	164 9
1998	122 0	205.7	169.1
1999	125.5	216.2	172 2
2000 (p)	126.7	228 3	180.4

Source IATA World Air Transport Statistics

Appendix 5
Glossary of Terms & Definitions

Revenue Passenger Kilometres (RPKs): The sum of the products obtained by multiplying the number of revenue passengers carried on each flight by the flight stage distance

Available Seat Kilometres (ASKs): The sum of the products obtained by multiplying the number of passenger seats available for sale on each flight stage by the stage distance

Freight Tonne Kilometres (FTKs): The sum of the products obtained by multiplying the total number of tonnes of each category of revenue load carried on each sector of a flight by flight stage distance

Available Tonne Kilometres (ATKs): The sum of the products obtained by multiplying the number of tonnes of capacity available for the carriage of revenue load on each flight stage of a flight by the flight stage distance

Operating Revenue: Revenue earned from such sources as passenger, freight, mail and associated activities on all scheduled services

Operating Result: Profit or loss attributable to all scheduled services before debiting net interest charge

Net Result: Profit or loss attributable to all scheduled services after debiting net interest charge

GDP: Gross Domestic Product

ICAO: International Civil Aviation Organisation

Monthly International Statistics (MIS): MIS is a key monthly management information report produced by IATA showing top line traffic and capacity developments in the international airline market on a timely basis (within six weeks of the end of the reporting period) Participant carriers provide monthly figures for RPKs, ASKs, FTKs and ATKs

Origin-Destination Statistics (ODS): ODS is a monthly collection by IATA of uplifted passenger numbers, and freight and mail tonnages. It represents IATA's most detailed data exchange, listing passenger totals by cabin, and also freight and mail tonnages at a city-pair level. ODS is distributed in either a printed format that displays data by carrier and route area, or in an electronic format where the data is shown by carrier and city pairs

World Air Transport Statistics (WATS): IATA's flagship statistical publication. Produced in June of each year, this manual contains the first publicly available annualised data on traffic, financial and operational trends at a global, regional and individual airline level. The latest edition, WATS 45, contains information from over 210 IATA Member Airlines, as well as data from the International Civil Aviation Organisation, Airports Council International and World Tourism Organisation

For further information on any of the above IATA Aviation Information & Research products, please e-mail air@iata.org.

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SAFE AND SECURE TRAVEL SNAPSHOT

October 8, 2001

Safety and Security have always been the top priorities of the air transport industry

What has been done to prevent a repeat of the events of 11 September?

As a direct response to the tragic events of 11 September, all security measures from departure to arrival, including those occurring in-flight, have been further heightened, such as:

- ▶ Intensified hand and checked baggage processing (passengers and baggage are being checked more closely under stricter security procedures. This may involve several checks prior to boarding)
- ▶ Stringent passport/immigration control and improved passenger screening methods (for example, photo ID required)
- ▶ Federal standards (USA), training and testing for security staff
- ▶ Restricted gate access at all airports
- ▶ Restriction of carry-on items (no sharp or knife-like objects, etc.)
- ▶ Increase presence of 'air marshals' (security agents) on board aircraft
- ▶ Cockpit security improvements
- ▶ Future aircraft design to take into account newest safety and security measures

Can I rely on these measures - today and tomorrow?

Security measures, both new and existing, are a smart way of doing business, because the No. 1 priority of the travel industry is to provide safe, reliable and secure air transport. Experience has shown, for example, that security measures taken at Heathrow Airport in 1989 after the Lockerbie bombing are still in place and have even become more rigorous at other airports. These include:

- ▶ Positive baggage / passenger reconciliation (passenger luggage will be put on board plane only if its owner has boarded)
- ▶ Reinforced background checks of all personnel hired by Airport, Airline, Ground Services, Catering, Cargo, etc.
- ▶ Mandatory baggage screening

These security measures - whether visible or invisible to the air traveller - are in place. Finally, airlines rely on governments for the first line of security measures (government intelligence), and on airport authorities and/or governments for subsequent security screenings

Register for IATA email updates

Sign up

How does technology help ?

New technologies are available to provide airlines and governments with greater certainty about the identity of people boarding aircraft, as well as the contents of baggage, cargo and mail. Another advantage of this increased security using new technologies is to streamline the passenger's journey, thus saving precious time for passengers, airlines, airports, customs and immigration. Modern techniques also apply to baggage scanning machines, which can detect trace elements of explosives, weapons made of new materials and suspicious substances

How can I help?

- ▶ Arrive early at the airport prior to your flight
- ▶ Be patient and co-operative with airline and security personnel
- ▶ Minimise hand luggage (check with your airline - some have reduced hand luggage to bare essentials)

What's the bottom line?

Security is a way of life during travel, and measures continuously evolve to meet the needs of the passengers and the industry. Without question, the travel experience is now different, but safety and security are still the No. 1 priority of air transport

- ▶ Above all, relax. Flying is safe and secure

New Technology - Making Travel More Secure

Have you heard of Biometrics?

Biometrics is the measurement of unique human traits. Widely known examples include photographs, fingerprints and DNA. Machine-readable biometrics include facial recognition, hand geometry, iris recognition, retinal scans and more. Each technique has its set of advantages and disadvantages, and a combination of biometrics can be used. Biometric identification can be stored on a database or on passports, credit cards and cellular telephones.

How can machine-readable biometrics help?

- Machine-readable biometrics can reinforce air transport security and have the potential to:
- ▶ Confirm an individual's identity with greater certainty. The passenger, in this case, cannot claim to be someone else.
 - ▶ Provide greater control for cabin crew and airport employees.
 - ▶ Substantially reduce the number of passengers passing through 'traditional' or current security systems, therefore providing inspectors and other airport/airline staff with more time to focus on other travelers. Biometric ID would allow for a 'one-stop check' of frequent flyers or passengers known to the airlines by monitoring check-in, passport control, and passenger and baggage processing.
 - ▶ Eventually, machine-readable biometrics in passports would improve security benefits for all passengers.

Information collected from travelers using a biometric ID in the 'one-stop check' would be shared electronically across borders. Passengers in transit or arriving at a destination would avoid repetitive checks, as all data from the 'one-stop check' would be forwarded to the entry, transit and exit authorities.

Science Fiction or Reality?

Systems using new technologies to secure and simplify the passenger process do exist and are being actively tested around the world. Co-operation on a multinational level, however, is critical. Only initiatives and technologies that are internationally compatible will ensure that the passenger's entire journey is safely and securely controlled from departure to destination.

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NEWS

FOR IMMEDIATE RELEASE

DATE: 9 October, 2001

No: 27

“TIME TO BEGIN RECOVERY” SAYS IATA’S PIERRE JEANNIOT

“I am very confident that our industry will weather the storm. It will emerge, bruised but reformed and very much strengthened. But all the actors – governments, infrastructure providers and airlines, need to share the same vision,” said IATA Director General & CEO Pierre J. Jeannot, speaking at the Hong Kong International Aerospace Forum.

Jeannot told delegates of potential industry losses of USD 7 billion on international scheduled services in 2001, up from the estimate of USD 2.5 billion before the September terrorist attacks, and of 120,000 job losses amongst airlines in the subsequent three weeks. But he also looked forward to a recovery in 2002, pointing out that flying was still the safest form of mass transport.

The Director General said that, in addition to more intense application of conventional airport security screening, defence against potential terrorism should consist of two elements: better government intelligence and a worldwide application of biometrics.

“IATA has been advocating biometrics for the past two years. People involved in using the air transport product, particularly frequent flyers, or delivering the air transport product - employees of airlines and airports, etc. - would have been subjected to an iris scan, and their details stored on a data-base. Once they have been positively vetted as a non-security threat, they should then be allowed to go about their lawful business, with no further checking. Resources can then be redirected to thoroughly checking those who have not been positively cleared, and could potentially represent a risk.”

During his visit to China, Pierre Jeannot also signed an agreement with the Civil Aviation University of China and Northern Jiaotong University, under which the IATA Aviation MBA qualification will become available in China. “China’s aviation industry faces the enviable challenge of needing to grow and lead the way into a future which now has China as a member of the World Trade Organisation. Well qualified aviation professionals are going to be in keen demand.”



IN THE WAKE OF THE APOCALYPSE

Remarks by
Pierre J. Jeannot, O.C., Director General & CEO
International Air Transport Association,
to a “Leadership Luncheon” of the
Hong Kong International Aerospace Forum
Hong Kong, Tuesday 9 October 2001

25 minutes at 13.30h

Mr. President, ... Ladies & Gentlemen,

Tuesday 11 September ... will be remembered as the darkest day in the proud history of civil aviation ...

This horrific event substantially altered the course of civil aviation ... at least for the next time frame.

As for the immediate ... it has certainly affected some of the things ... I had originally thought of discussing with you.

The event seriously challenged our ability to provide immediate support to our Members ... under a totally new form of crisis.

Fortunately ... some of the lessons learned under the rather different ... but nevertheless critical Y2K issue ... were useful ... and partly adaptable.

As we witnessed the attack ... IATA was able to move immediately into an active mode:

- Within two hours of the first aircraft hitting the first twin tower... we had set up a security crisis management centre within our technical headquarters in Montreal ... to collect ... analyse ... and disseminate information to our Members.
- An action plan was developed to coordinate IATA's immediate response on behalf of the industry.

- Messages were sent to all airlines stressing the urgency to immediately implement a higher security level.... Stressing also the need to address code-sharing operations
- Messages were sent to all government authorities indicating our full cooperation in developing additional security measures ... and the need for international harmonisation
- We set up an emergency meeting of our Security Committee Steering Group to identify practical and efficient ways of further tightening security... and began to develop recommendations to the ICAO assembly.... meeting last week.
- As operations were allowed to re-start.... we intervened with the FAA to ensure that non-US carriers be treated fairly and appropriately.
- As war risk insurance was being withdrawn from all airlines ... despite our efforts ... we set up and coordinated ... an insurance information centre in Geneva ... to track the action by governments ... in providing temporary support to the airlines.

As we faced apocalyptic conditions ...for a few days ... the industry looked close to collapsing ...

Would the industry ever be the same again?

Would it need to be drastically re-sized?

Should we retreat into a Fortress Aviation?

Which would have been wrong. Because life ...and the life of this industry ...must go on.

True ... we are now in the wake of the apocalypse But we must look to the re-establishment of normality ... and take whatever steps are required to restore the public's confidence in flying.

This is an industry ... rooted in the genuine needs ...aspirations and businesses ...of most individuals on the planet.

An industry that faced the challenges ... of running a complex global business ...that operates on wafer thin financial margins ...to the highest level of public and private scrutiny ...and trust

It seems to me unlikely ...that this industry would now seek to steal quietly away into the night ...in response to its temporary trials ...however great they may be!

As you can well imagine ... the key question at the centre of our pre-occupations has been ...what have been the effects of September 11 ...and how long will they last?

- **Traffic and Financial:** before September 11 ...I was going to tell you of a forecast loss this year ...2001...of USD 2.5 billion ...on the international scheduled services of IATA airlines worldwide.

This was to be the first loss for the industry since 1993.

I would hesitate ... at this moment ...to call our current estimate a *forecast*...the crystal ball is still too foggy!

One scenario we are *looking at* ...is a net loss of USD 7 billion on those services ...if traffic and capacity are both cut during September-December by 15 percent.

Which would represent a reduction of traffic of nearly 5 percent for the year ...and nearly 3 percent in capacity.

To that loss ...you would have to add ...to get a fuller world picture ...the USD 3 to 5 billion losses ...of US carriers on their domestic services.

As for recovery ...if we use the Gulf war of 1991 as our model ...traffic growth took 7 months to become positive once more...and another 4 months to return to its longer-term trend.

To encourage that recovery ...our industry will need ... once again ... to communicate forcefully ... pointing out that we *still* have a safe and secure industry ...

An industry which abides by even more exacting standards ... that we set ourselves ...and which the world has come to expect ...*uniquely* ...from air transport!

While risks exist ... these need to be put into context.

Let me use an example from the UK ... but other developed societies do not differ much from it.

In the UK between 1990 and 1999 ...there was one person killed for every 50 *billion* passenger kilometres flown.

So ...if your annual air travel was one round trip from London to New York ... your chances of dying en-route were about 1 in 3 million.

But if you *drove* 15,000 kilometres a year ... your chances of dying behind the wheel of a car were 1 in 20,000 ...

In other words ... driving was *150 times* more dangerous than flying....

Yes .. you might say ...but what about September 11? Well ...it was certainly tragic that 266 people died on 4 hi-jacked flights. But without taking anything away from that senseless ... monstrous event ... it now appears that that threat has been around for some time ...and yet ... more than 4 million people were safely flying each day on more than 50,000 flights....last year.

- **Employment:** our Members shed more than 7 percent of their employees ...120,000 ... in the two weeks following the attacks ...with the worst affected being the United States of course... but with heavy job losses also in Europe.

The difficulties experienced by Swissair ... and Sabena ... indicate that we have yet to see the end of these job losses.

Many of these people represent years of investment ...in skills and training.

During the last industry financial crisis ...of 1990-93 ...it took a year for job losses to reach that level.

- **Insurance:** as I indicated earlier ...our Members' fleets came close to being grounded ...some two weeks ago. The problem was a ten-fold increase in premiums and a vastly reduced cap on war-risk insurance. It affected not only airlines ...but the third parties who provide them with services.

I personally intervened ...with insurance market leaders ...ICAO ...and individual governments ...to provide some essential bridging while the insurance markets settled down ... and returned to some degree of normality.

- **Security:** and naturally ...the greatest attention has focused on security. This is the first time ...and we must make it the *only* time ...in history ...civilian aircraft have been deliberately ... successfully ... turned into fuel-bombs.

A lot of words have been said about security lately ...only some of them helpful.

The primary defence ...against hijacking ... or more technically described ... unlawful interference with civil aviation is ...and always has been ...the best possible intelligence.

Terrorists have to be stopped first ... from entering a country, ...never mind entering an airport or boarding an aircraft ... by the highest quality of shared international criminal intelligence.

- ' For the rest ...arming pilots is not a solution. ... And you will note that this idea has not been adopted even within the United States.

Locked or reinforced cockpit doors are a useful line of defence... as long as pilots can still open them according to *their* perception of a *safety* ...as opposed to security ... emergency.

The use of video cameras to provide the pilots with a view of the passenger cabin at all times ... would also certainly be helpful.

The notion of air marshals can be a helpful confidence building measure ... for some time and not necessarily on all flights.

The idea of using police ... instead of private companies ... for the screening of baggage and passengers ... deserves support.

But some of the *best* security enhancements that can be made ... reside in a massive increase in the use of biometrics ... for *everyone* who comes in contact with an aircraft ... or the airside of an airport....

This ... IATA has been actively advocating for the past two years.

Our original aim was to speed passengers through airports ... using such devices as iris scans of passengers' eyes ... which happens to be very much more reliable ... for example ... than fingerprints.

Our aim is to encourage the use of such devices ... as a contributor to increased security.

People involved in using the air transport product, particularly frequent flyers ... or delivering the air transport product ... employees of airlines and airports, etc. ... would have been subjected to an iris scan ... and their details stored on a data-base.

Once they have been positively vetted as a non-security threat ... they should then be allowed to go about their lawful business ... with no further checking.

Resources can then be redirected to thoroughly checking those who have not been positively cleared ... and could potentially represent a risk.

Mr. President ... at this point ... it may be appropriate for me to cover some of the aspects ... I had originally intended to address "pre-September 11" ... but the implications of that day will of course ... occasionally intrude....

It is always a great pleasure to be once again in Hong Kong ... I believe this is my sixth visit in my current capacity. I feel that I am in the company both of friends ... and of aviation enthusiasts and experts... of which there are so many in Hong Kong.

Another reason that I feel at home ... is that I originate from a city... Montreal, Canada.... which is another island also very much involved with aviation.

While Montreal's aviation interests may emphasise manufacturing... Hong Kong has turned aviation into one of the finest instruments for development of commerce...and trade not only with the rest of China but also with the world ...and of course tourism.

I want to pay tribute...right at the start...to Hong Kong's Director of Civil Aviation ...Albert Lam He is a good friend .. and very supportive of IATA's work.

Having said that ... I hope not to strain that friendship ...in any of the remarks I make ...on Hong Kong as a thriving aviation centre!

By last year ...Hong Kong had well recovered from the Asian economic recession ...

Last year ...the number of passengers using Chek Lap Kok ...at 32.8 million ...was second only to Seoul in the Asia/Pacific region ...and far ahead of Tokyo and Singapore.

Passenger growth extended into the first quarter of this year ...2001 ...with Hong Kong growing at twice the rate of the other "big five."

But the downturn in the global economy started hitting exports... and this became reflected in the cargo figures ...early this year.

Hong Kong is one of the world leading airports...in terms of cargo.

In the year 2000 it had some 2.2 million tonnes... second only to Memphis ...and about 8 percent of the world total.

It has one of the most advanced cargo handling systems. Less than three years after it opened,... Hong Kong International Airport has become a *seaport* as well ...as it aims to become a fully multi-modal hub.

This provides direct sea links... via ferries shuttling freight ...to 16 ports in the huge manufacturing district ...of China's economically vibrant Pearl River Delta

The Pearl River Delta ...is seen to be the key to Hong Kong's future as a trading centre. The airport authority stated aim ...is for Chek Lap Kok to maintain its status as the premier airport for the Pearl River Delta.

China's accession to the World Trade Organisation...and the associated estimate that China's trade with the world will *double* in the first five years after entry ...will provide added opportunity to expand Chek Lap Kok's success.

Possibly CLK may set its sights beyond the Pearl River Delta ...to encompass China as a whole?

The latest ATAG publication ...*Asia/Pacific Air Traffic Growth & Constraints*... clearly states IATA's view that ... with five airports in close proximity... Hong Kong, ...Guangzhou,... Shenzhen, ...Macau ...and Zuhai...there is a need for a *single* air traffic control facility ...to manage the airspace of the Pearl river Delta.

Significant changes to airspace management are vital ...in order for Chep Lap Kok to be able to expand and improve safely its operational efficiency.

Now ...from a question of the regional control of airspace ... let me move a very local issue which has an impact on airlines' profitability ...user charges.

I am sure that the local authorities would be disappointed ...~~if~~ I did not raise this matter again!

Even with the 15 percent discount on charges introduced in January 2000 ...Chek Lap Kok continues to have some of the highest aeronautical charges in the region. And unfortunately ... at this time ...the current discount is valid only up to March 2002.

This year ...in a bid to attract new traffic ...~~H~~ong Kong also introduced an incentive scheme for operations to new destinations.

Now ...we understand that the airport is ~~p~~lanning to revise *all* charges ...from March 2002.

Preliminary indications are that charges would be increased.

A matter of further concern to the airlines ...is Hong Kong's plans to deviate from the single till policy.

Therefore ...given the current slowdown in their economies and the substantial hardships faced by the airlines ...and one could easily expand on this ... it would be very appreciated if Hong Kong would agree to reduce charges further ...or at least to extend the current 15 percent discount for a further two years ...to tide the airlines over their anticipated recovery period.

We also urge the airport ...to continue to ensure that the contributions from non-aeronautical revenue ...are sufficient to enable reasonable aeronautical charges.

The attitude of governments around the world has ... for too long ... tended to be ...we will design...build ...and operate ...every item of infrastructure that you need. All you have to do is use it ... and pay the prices that will be decided by us!

And so ... getting the user involved ...the airlines ... and allowing market forces to act ... is indeed a welcome change ...

And one interesting change to these arrangements ...has been the recent amendment to the governance arrangements of the United Kingdom National Air Traffic Service ...NATS

NATS is now run as a Public/Private Partnership between the government of the United Kingdom *and* a consortium of airlines who actually *use* the UK airspace.

They know ...better than anyone else ...what is needed ...how it should be provided ...how it can be improved ...and what it should cost!

I said that the events of 11 September would occasionally intrude into my remarks. I think the NATS PPP is a case in point.

It would be only too easy ... for a service provider to airlines ... to adopt the approach that ...since demand for our services has gone down ...and our expenses have gone up. ... we simply need to put up the unit rates to compensate.”

They are not doing that ... their approach is that which should be followed by every prudent business ... in these times.

It is ... “how can we cut our our costs ... to match the decrease in revenue ... *now* and in the longer term?

How can we increase productivity? ... How can we help our customers through the current crisis ...maintaining quality ...and lowering our costs?

Mr. President ...an unprofitable industry ...is vulnerable on many fronts ...mainly because its range of options becomes reduced.

It has ...arguably ...become more vulnerable in *any case* ...as industry liberalisation has proceeded.

Liberalisation ...if allowed to run its full course ...should lead to corporatisation ...and privatisatiuon ... of infrastructure providers ...namely airports and air navigation systems providers ... and if consolidation not only of airlines ...but also of infrastructure is allowed ... the result could be extremely beneficial.

But ...if liberalisation is applied in a haphazard way ...it can also weaken or destroy established industry system efficiencies ...which benefit the consumer.

Driven by actions taken at the national or regional level ... we have seen “*fragmentation*” of the regulatory system

Fragmentation was most observable in competition law,... passenger rights, ...slot rules, ...and liability.

Their effect could significantly affect the universality ... and convenience ...of our current system.

In response ... we argued that basic principles should be respected,... whatever regulatory changes might occur in the future.

Without the industry global “system”, ...efficient “doing business” mechanisms like the clearing house,... the agency program and,... most importantly the *multilateral interline system*, ...could be lost.

This would mean added costs for all,... but particularly for smaller carriers, ...and also put in doubt their ability to compete... and ultimately survive.

Even for major alliance carriers it raised serious questions.

Similarly, loss of the “system” ...was seen as a danger for any nation s that rely on access to the worldwide airline network, ...and to customers whose choices and economic benefits could be significantly reduced.

IATA commissioned an external study ...that showed Multilateral Interlining currently saves consumers nearly USD 3 billion annually.

An IATA paper was submitted to the recently convened ICAO Assembly,... explaining the importance of preserving the multilateral interline system, ...and asking the ICAO Council to study how this could be accomplished.

The support of Hong Kong ... and the Peoples Republic of China...in the safeguarding of the multilateral interlining system ...and its associated standards ...would be invaluable ... and most welcome.

Again ... a “September 11 factor” may come into play here.

It is conceivable that ...in the immediate financial melt-down of reduced traffic and increased costs ...the process of evolution to a more concentrated industry ...may be accelerating....and some airlines may not survive

In this extremely difficult time for our industry ... it is important that the essential elements ...of system flexibility ...and consumer choice ...which are the hallmarks of our world system ... do not *themselves* become ... collateral casualties.

Mr. President ... in the time remaining ...let me touch very briefly on some of the programmes ... and issues ...which are of significant importance to our industry.

I would like to solicit support for an initiative that we have taken ...to significantly reduce the cost of financing mobile assets ...such as aircraft.

It is known as “Unidroit”...which as its name implies...is a treaty to unify national laws ...in respect of codifying the rights and responsibilities of the various parties to aircraft finance

Beneficiaries of the treaty include:

- Governments ... first through reduced debt levels to governments; ...and secondly as risk reductions to governments providing export credit supporting aircraft sales;...
- Airlines ... through reduced financing costs ...and enhanced access to funds and funding sources, ...
- Commercial aircraft manufacturers and their suppliers... through increased sales, output and employment levels, ...as well as expanded markets;
- Aviation industry investors ... through higher valuations of, ...investments, ...as well as enhanced security;...and...
- Passengers and other end users ... by means of pass-through price reductions...and increased levels of service.

The cost-savings and external debt-level reduction ...will in particular favour developing economies, ...whose systems do not currently reflect asset-based financing principles.

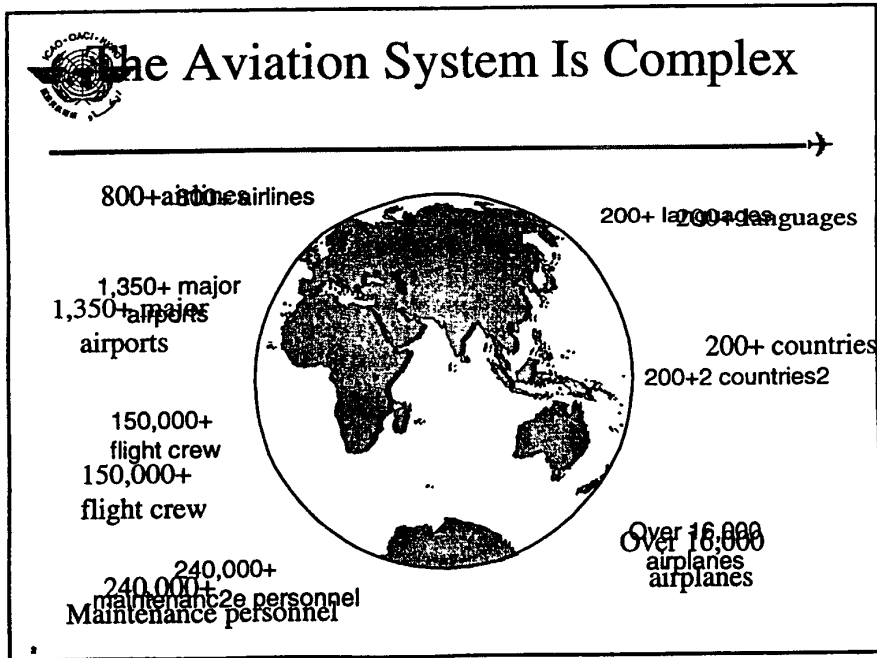
As you well know ...safety continues to be our top priority.

The airline industry needs to cut its accident rate in half ... because if it does not ... since air traffic roughly doubles every ten years ... it is going to face twice as many accidents – about one a week, worldwide ... ten to twelve years down the road. .

Note ...I talk here of *safety*. Not of *security* ...which we have already discussed.

The IATA Safety Strategy 2000+ places a special emphasis on Controlled Flight into Terrain (CFIT) ... Approach & Landing ... and regional disparity.

To address some of the regional disparities ... IATA, for instance, focused on Latin America last year.





Safety Oversight

- SARPS
- ICAO Annexes
- Responsibilities Of States
- ICAO Safety Audits
- Global Aviation Safety Plan



Standards and Recommended Practices

- Licensing of Personnel
- Rules of the Air
- Aeronautical Meteorology
- Aeronautical Charts
- Units of Measurement
- Operation of Aircraft
- Nationality and Registration Marks
- Airworthiness
- Facilitation
- Aeronautical Telecommunications
- Air Traffic Services
- Search and Rescue
- Aircraft accident Investigation
- Aerodromes
- Aeronautical Information Services
- Aircraft Noise and Engine Emissions
- Security
- Safe Transport of Dangerous Goods



Lessons Learned

- **Problems do exist and are not confined to one region**
- **Areas of concern:**
 - **Basic aviation law and specific regulations**
 - **Structure, personnel and financial resources**
 - **Certification and supervision of operators**

*EAA IASA
ICAO*



Global Aviation Safety Plan (GASP) Objectives

- **Significantly reduce worldwide accident rate**
- **Enhance identification of shortcomings in the air navigation field**
- **Improve ICAO's ability to compile, assess and disseminate safety-related information**



If you think safety is expensive.....

Try having an accident!

13



Annex 13: Aircraft Accident and Incident investigation

OBJECTIVE OF THE INVESTIGATION

“The sole objective of the investigation of an accident or incident shall be the prevention of accidents and incidents. It is not the purpose of this activity to apportion blame or liability.”

14



Asia and Pacific Region

- 67% of the World's poor
- 800 million people categorized below the poverty line
- Eleven least developed States
- Three developed States
- Most heterogeneous Region

17



ICAO Asia and Pacific Office

- Based in Bangkok, Kingdom of Thailand
- ICAO Regional Office has been in place for 53 years.
- Liaison with 52 States/Territories and several Regional Organizations
- Annual Conference of DGs
- APANPIRG
- ATS Coordination Bodies

18



Key elements of COSCAP (continued)

- **Establishment of a Core of Highly Qualified Regional Flight Operations & Airworthiness Inspectors.**
- **Backstopping States to Improve Their Flight Safety Oversight Capabilities.**
- **Establishment of Steering Committee.**

21



Safety in the Future

- **IUSOAP-expansion of programme**
- **CFIT/ALAR Prevention**
- **Regional Safety Groups**
- **CNS/ATM**
- **Enhanced Security**

22

Human Factors, Cockpit Resource Management, and System Safety

IATA Seminar for Asia/Pacific Journalists
Kuala Lumpur
October 11, 2001

Robert L Helmreich, PhD, FRAeS
The University of Texas Human Factors Research Project



Some Definitions

- Error –action or inaction that leads to a deviation from crew or organizational intentions or expectations
- Threats – factors in the operating environment that increase risk to safety
- Crew Resource Management (CRM) – concept of crew training developed address human factors causes of accidents and incidents

The Safety Challenge

Flight crews must manage the threats and errors that exist in the aviation system

Critical Data for Safety

Safety requires data from multiple sources

- **Accident investigation**
- **Confidential incident reporting systems**
Data reveal system and flight crew vulnerabilities
- **Route checks**
Data show crew proficiency and procedural knowledge
- **Flight Data Recorders – FOQA**
Data reflect to “what happened” in terms of flight parameters
- **Surveys of personnel**
Perceptions of safety and attitudes about flight management
- **Observing normal flights – Line Operations Safety Audit (LOSA)**
*Gives data on why things happen and how they are managed
Provides a realistic baseline of safety*

Line Operations Safety Audit (LOSA)

- LOSA – cockpit observations of flight crew performance during regular scheduled flights
 - *Observers unobtrusive – collecting data not participating in flight*
 - *Team of observers from different backgrounds*
 - *Line pilots / Union representatives*
 - *Check airmen*
 - *Safety and Training pilots*
 - *LOSA Collaborative – University of Texas research team*
 - *All data are DE-IDENTIFIED and CONFIDENTIAL*

Purpose of LOSA

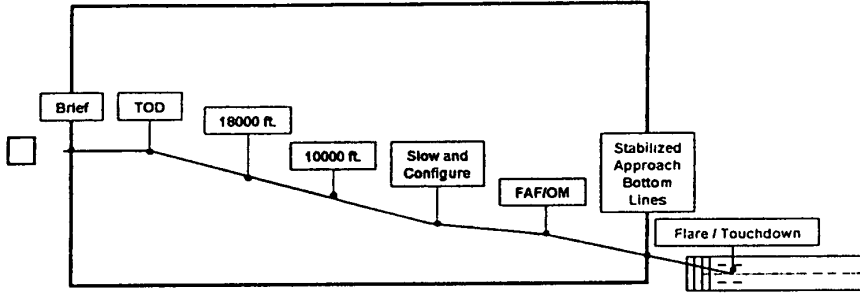
- Data provide a baseline of safety pertaining to:
 1. Flight crew performance – strengths and weaknesses
 - *Proficiency*
 - *Decision-Making*
 - *Teamwork*
 - *Procedural compliance*
 2. System performance – strengths and weaknesses
 - *Culture*
 - *Airspace System – Airports and Navigational Aids*
 - *Aircraft design / automation*
 - *Standards / Training / Safety / Maintenance*
 - *Crew support – ATC, Cabin, Ground, and Dispatch*

Support for LOSA

- 2000 ICAO endorses LOSA in letter from Secretary General to Jane Garvey, FAA Administrator
- 2001 IATA endorses LOSA as proactive safety methodology
- 2001 May LOSA Week held in Hong Kong attended by 16 countries
- 2001 November LOSA Week scheduled in Panama
- 2001 LOSA briefing of ICAO Council scheduled
- 2002 LOSA Week scheduled in United Arab Emirates
- 2002 ICAO LOSA Handbook to be issued

**LOSA data highlight the
most critical phase of flight**

The Blue Box

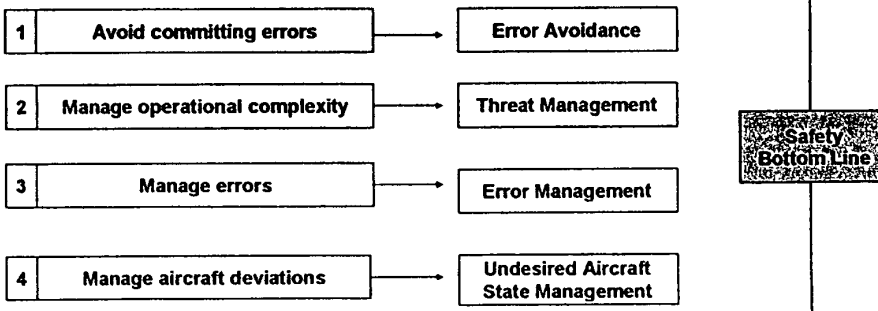


The Blue Box is the phase of flight with the greatest number of threats and errors

Human factors training enhances awareness and performance in the Blue Box

Safety Management

What do flight crews have to do to safely fly from A to B?

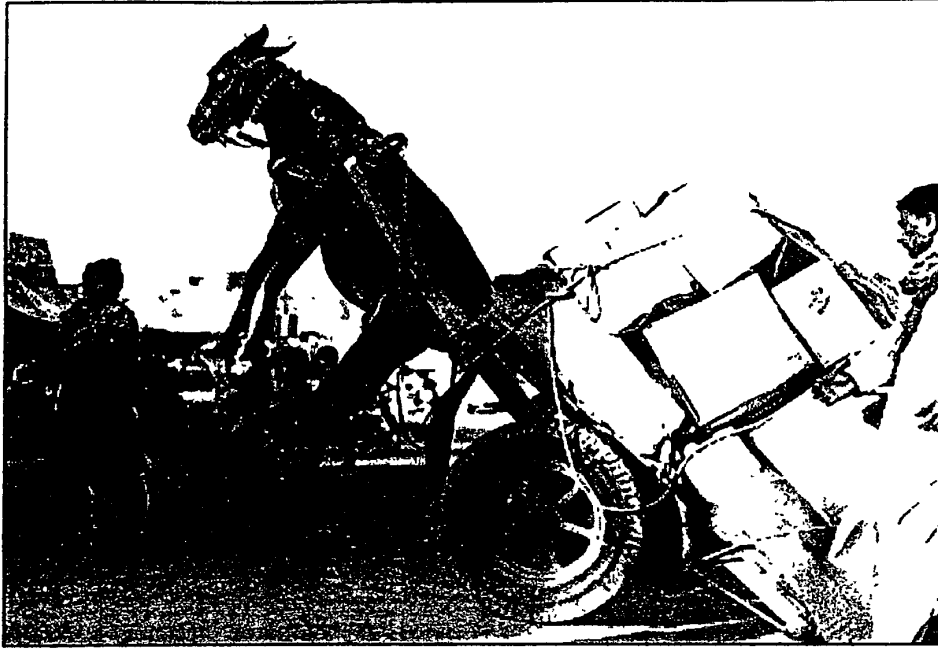


Human Error

Errors are inevitable

Error is the downside of having a brain

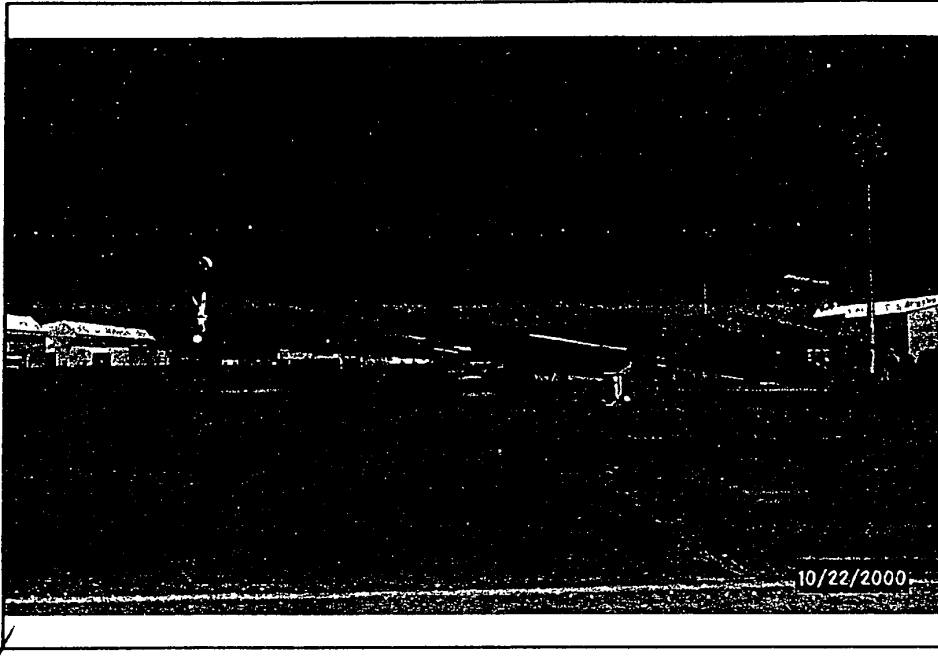
***Error has a long history when humans
interact with technology***



New technology has not banished error



Nor has even newer technology



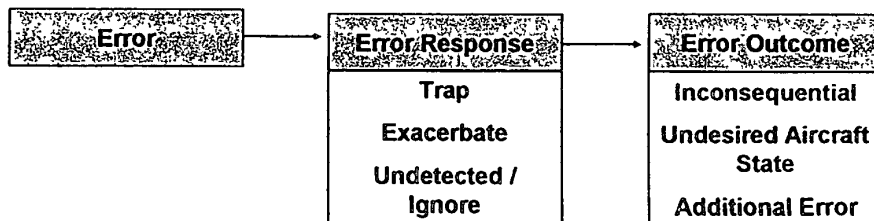
Errors Result from Human Limitations

- Limited memory capacity
- Limited processing capacity
 - *multi-tasking capability*
- Limits imposed by stressors
 - *tunnel vision*
- Limits imposed by fatigue and other physiological factors
- Group dynamics
- Cultural influences

Error Avoidance

Total error avoidance is an unrealistic goal

Error Management



Most errors are inconsequential or are trapped

Threat Management

- Threats - Originate outside the flight crew's influence but require active management to prevent them from becoming consequential to safety
 - *Adverse weather*
 - *Terrain*
 - *Traffic*
 - *Airport conditions*
 - *A/C malfunctions*
 - *Automation events*
 - *Communication events*
 - *Operational time pressures*
 - *Non-normal operations*
 - *ATC command events / errors*
 - *Cabin events / errors*
 - *MX events / errors*
 - *Dispatch events / errors*
 - *Ground crew events / errors*

Undesired Aircraft State Management

- Undesired Aircraft States – Aircraft deviations at the edge of the safety envelope
 - *Incorrect aircraft configurations*
 - *Vertical deviations - altitude*
 - *Lateral deviations - heading*
 - *Speed too high*
 - *Speed too low*
 - *Abrupt aircraft handling*
 - *Path / glide slope deviations*
 - *Unstable approach*
 - *Long landing*
 - *Firm landing*
 - *Wrong taxiway / runway*
 - *Runway incursion*

Crew Resource Management is a critical resource to help crews manage threats, errors, and undesired aircraft states

The Many Generations of CRM

- **First Generation** – Cockpit Resource Management
 - *Strong focus on personality and interpersonal behavior*
- **Second Generation** – Crew Resource Management *So Team work*
 - *More team oriented and specific to flight operations*
- **Third Generation** – CRM training in context
 - *Considered the environment in which flight crews operated (e.g., org culture)*
 - *Extended CRM to other groups (e.g., Check airmen and flight attendants)*
- **Fourth Generation** – CRM integration and proceduralization
 - *Doing away with stand-alone CRM training*
 - *Full integration of CRM with technical training (e.g., AQP)*

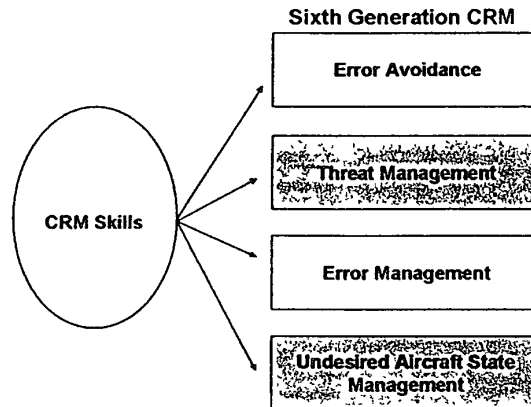
Fifth Generation CRM

- Criticisms of previous CRM generations
 1. *CRM had lost it's focus*
 - CRM is not just training that helps pilots work together as a team
 2. *CRM had become an end unto itself*
 - Trained and evaluated CRM in isolation of technical performance
- Fifth generation CRM – Needed to make the original goal of CRM more explicit and universal – Error management
 - *The Error Troika – avoid, trap, or mitigate error*

CRM, Threat and Error

- How do flightcrews detect and manage error in normal operations?
 - *What are effective and ineffective error management strategies?*
 - *What part does CRM play in error management?*
- The perspective of CRM becoming more refined
 1. *Expanding the definition of fifth generation CRM*
 2. *Teaching specific behaviors that serve as "threat and error countermeasures"*

An Expanded Definition of CRM



Threat and Error Countermeasures

- Specific behaviours stressed in CRM are “threat and error countermeasures
- Four groupings of threat and error countermeasures have emerged
 1. *Team building*
 2. *Planning*
 3. *Execution*
 4. *Review / Modify*

Team Building Countermeasures

1. LEADERSHIP – *In command, decisive, coordinates flightdeck activities*
2. COMMUNICATION ENVIRONMENT – *Open communication channels established and maintained*

Planning Countermeasures

1. BRIEFING – *Complete and interactive communication*
2. PLANS STATED – *Plans fully communicated*
3. WORKLOAD ASSIGNMENT – *Roles and responsibilities clearly defined*
4. CONTINGENCY MANAGEMENT – *Strategies developed to manage expected and unexpected threats*

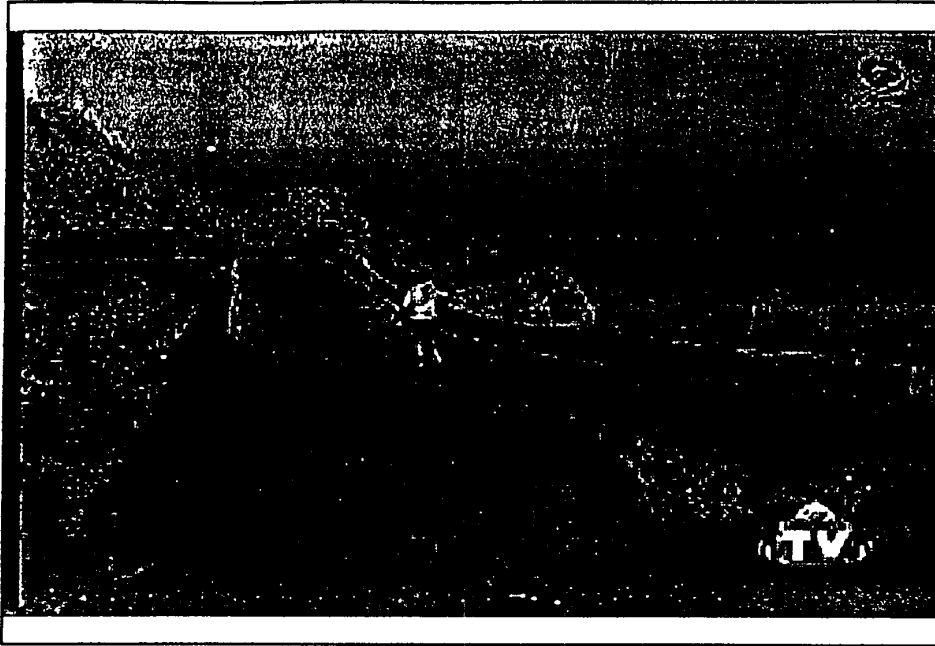
Execution Countermeasures

1. **MONITOR / CROSSCHECK** – *Crosschecking of systems and crew members*
2. **WORKLOAD MANAGEMENT** – *Prioritization of tasks*
3. **VIGILANCE** – *Remaining alert to the environment and aircraft position*
4. **AUTOMATION MANAGEMENT** – *Proper balance of automation and workload*

Awareness - Review / Modify Countermeasures

1. **EVALUATION OF PLANS** – *Plans reviewed and modified; shared mental models for situation awareness*
2. **INQUIRY** – *Questions asked to investigate and clarify current plans of action*
3. **ASSERTIVENESS** – *Juniors communicate critical information with appropriate persistence*

The following shows the outcome when two people have differing mental models



Summary

- Human factors awareness has grown to cover all the factors in the operating environment
- Data-driven CRM programs provide flight crews with the specific skills needed to avoid and manage threats and errors



University of Texas
Human Factors
Research Project



Our new website: www.psy.utexas.edu/helmreich



Flight Safety Foundation

Shaping Safety Strategies With Airline Accident Data

*Insights and Examples for Context
in News Media Coverage*

**Wayne Rosenkrans
Senior Editor
Publications Department
Flight Safety Foundation**



Flight Safety Foundation

Today's Presentation

- **Brief FSF background**
- **Shift to data-driven accident prevention**
- **Insights/context from accident data**
- **Parallel challenges for journalists**
- **Questions**

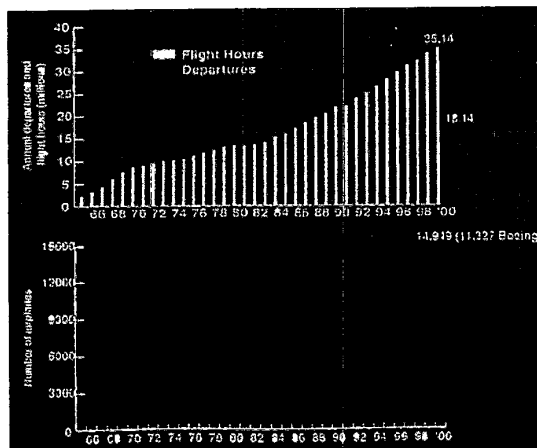


Shift to Data-driven Methods

- “Chasing the last accident”
- In-depth analysis over time, international consensus, recommendations and tools (controlled flight into terrain)
- Further data analysis, practical tools and regional implementation (approach-and-landing accident reduction)



Departures, Flight Hours and Jet Airplanes in Service



- 14,949 jet airplanes in service in 2000
- 18.14 million departures in 2000
- 35.14 million flight hours in 2000
- 7 manufacturers — 33 significant types in service as of Dec. 31, 2000

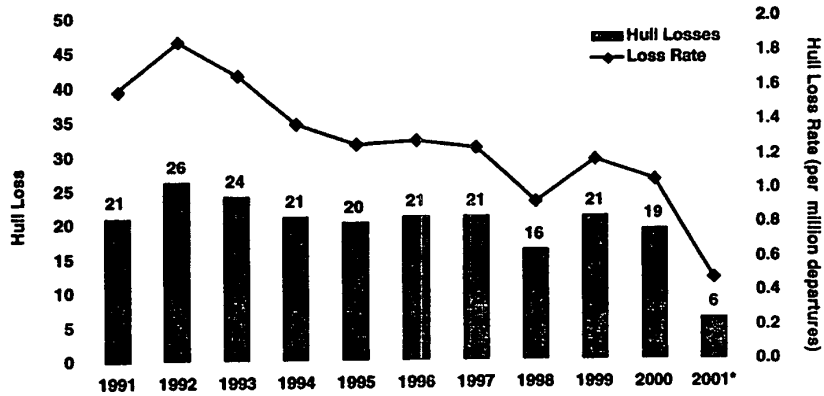
Source: The Boeing Co.



Flight Safety Foundation

Hull-Loss Accidents

Worldwide Commercial Jets (>60,000 pounds, non-CIS) 1990-2001*



Source: The Boeing Co.

CIS = Commonwealth of Independent States
60,000 pounds = 27,000 kilograms

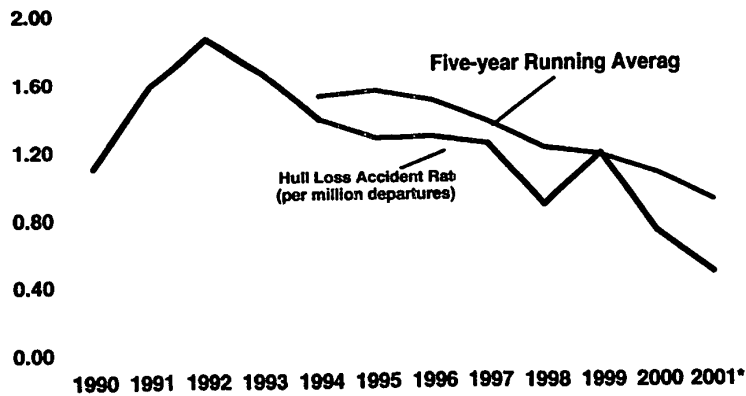
*Through 9/15/01



Flight Safety Foundation

Hull-Loss Accident Rate

Worldwide Commercial Jets (>60,000 pounds, non-CIS) 1990-2001*



Source: The Boeing Co.

CIS = Commonwealth of Independent States
60,000 pounds = 27,000 kilograms

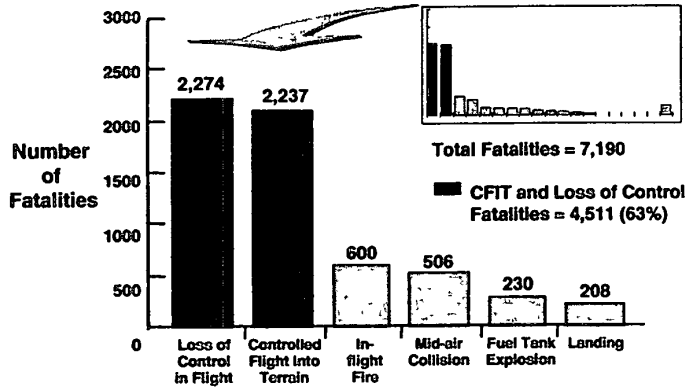
*Through 9/15/01



Flight Safety Foundation

Worldwide Airline Fatalities

Commercial Jets (>60,000 pounds, non-CIS)
Classified by Accident Type, 1990-2000



Source: The Boeing Co.

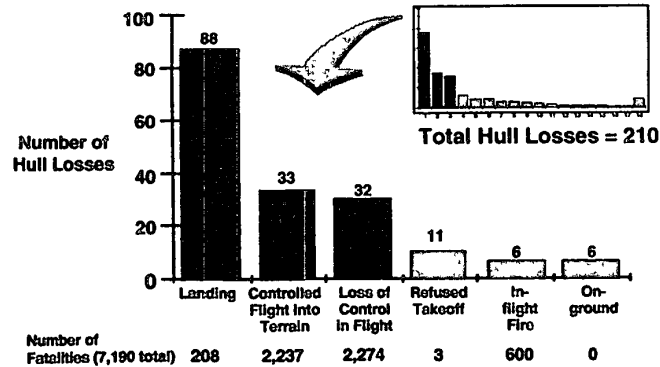
CIS = Commonwealth of Independent States
60,000 pounds = 27,000 kilograms



Flight Safety Foundation

Worldwide Airline Hull-loss Accidents

Commercial Jets (>60,000 pounds, non-CIS)
Classified by Accident Type, 1990-2000



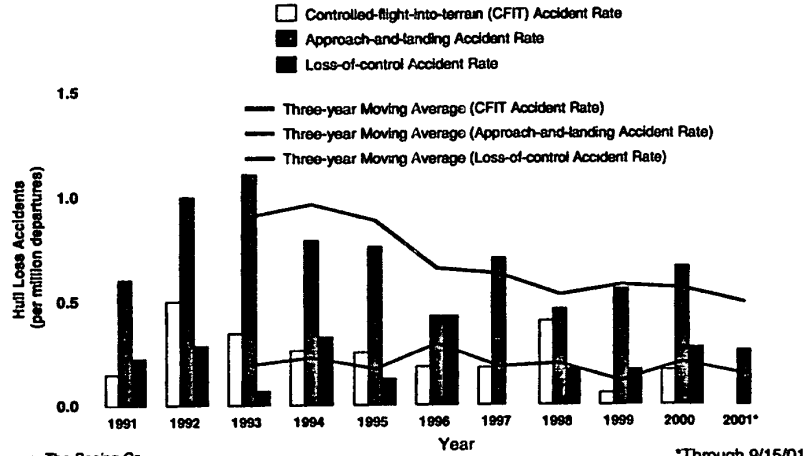
Source: The Boeing Co.

CIS = Commonwealth of Independent States
60,000 pounds = 27,000 kilograms



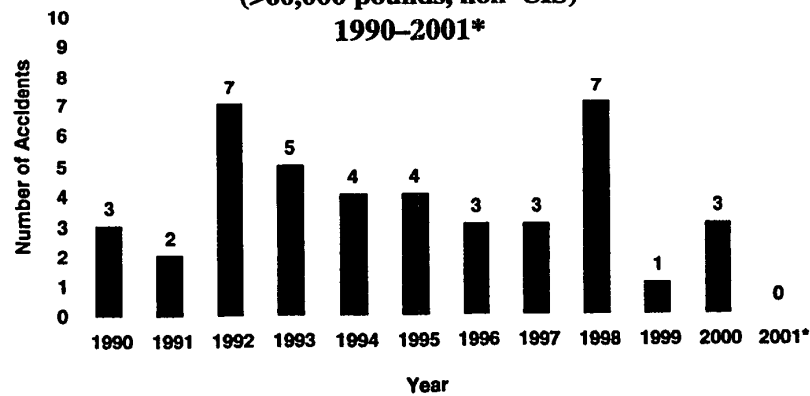
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CFIT/Approach-and-landing/Loss-of-control Hull-loss Accidents Worldwide Commercial Jet Airplanes (>60,000 pounds, non-CIS)



Flight Safety Foundation

Controlled-flight-into-terrain Hull-loss Accidents Worldwide Commercial Jet Airplanes (>60,000 pounds, non-CIS) 1990-2001*



Source: Honeywell (Don Bateman)

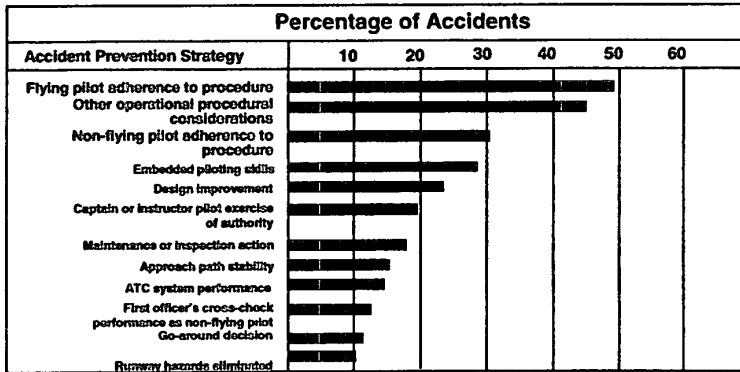
CIS = Commonwealth of Independent States
60,000 pounds = 27,000 kilograms

*Through 9/15/01



Accident Prevention Strategies

Hull-loss Accidents (1982-1991)

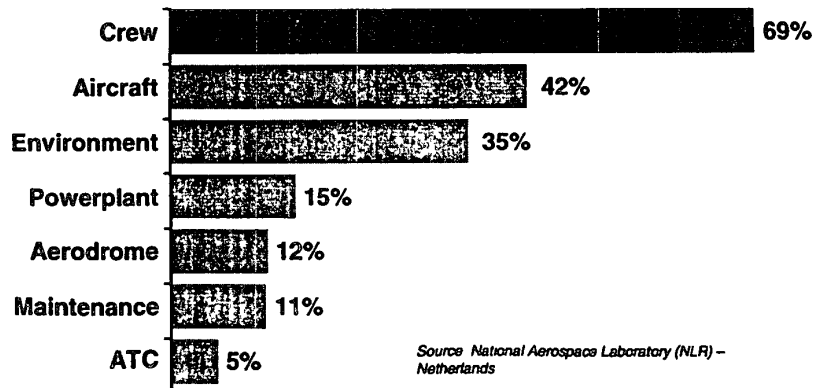


Source: The Boeing Co



IS Nonadherence to Procedures Really Such an Issue?

Factors in Aircraft Accidents, 1970-1997



Source: National Aerospace Laboratory (NLR) - Netherlands



Parallel Challenges for Journalists

- **Risk communication**
- **Need for sources to provide “data-driven” answers to aviation safety questions**
- **Variation in data publication by authorities**
- **Focus limited to the latest accident**
- **Unfamiliarity with what can be done in the entire system to prevent accidents**



Reference

- **Boeing Commercial Airplanes. *Statistical Summary of Commercial Jet Airplane Accidents, Worldwide Operations, 1959–2000*
www.boeing.com/news/techissues/pdf/2000_stat_sum.pdf**



Flight Safety Foundation

Further Reading

- **“International Organizations Rise to Challenge to Prevent Approach-and-landing Accidents”**
Flight Safety Digest (August–September 2001)



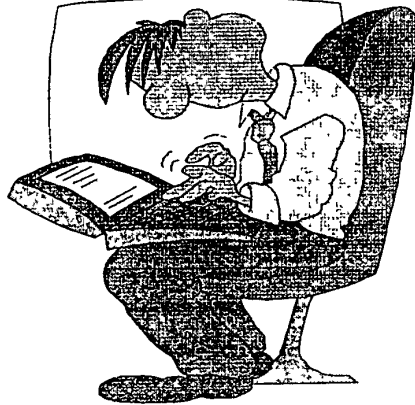
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Questions?

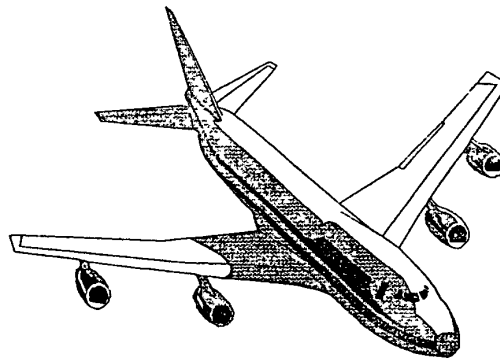
- **Flight Safety Foundation**
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TOM BALLANTYNE

Chief Correspondent, Orient Aviation

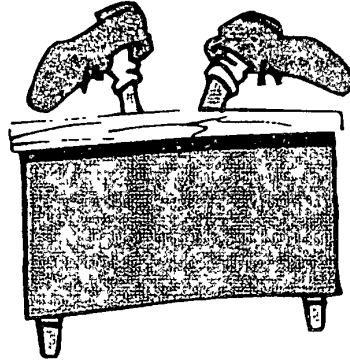


**IATA Seminar for
Asia/Pacific Journalists
11-12 October 2001
Kuala Lumpur, Malaysia**



**Being an aviation "specialist" is often a rather
tenuous occupation.**

**Safety incidents send
airline executives diving for
cover.**

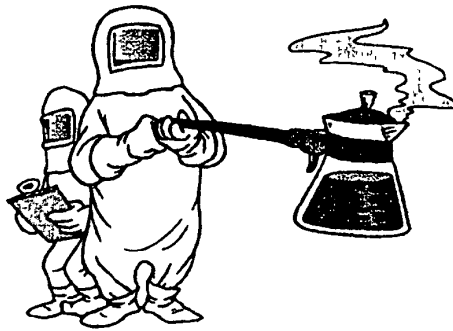


Why? They are Bad, Bad News!

**But Reporters are under
pressure to report... even
without information!**

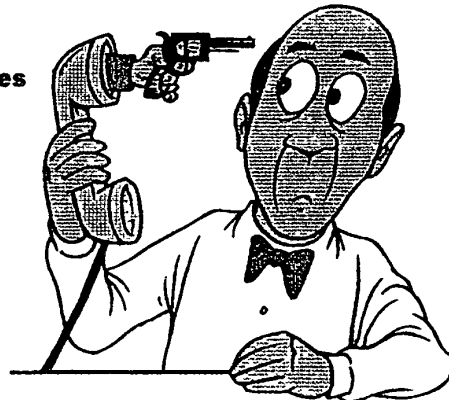


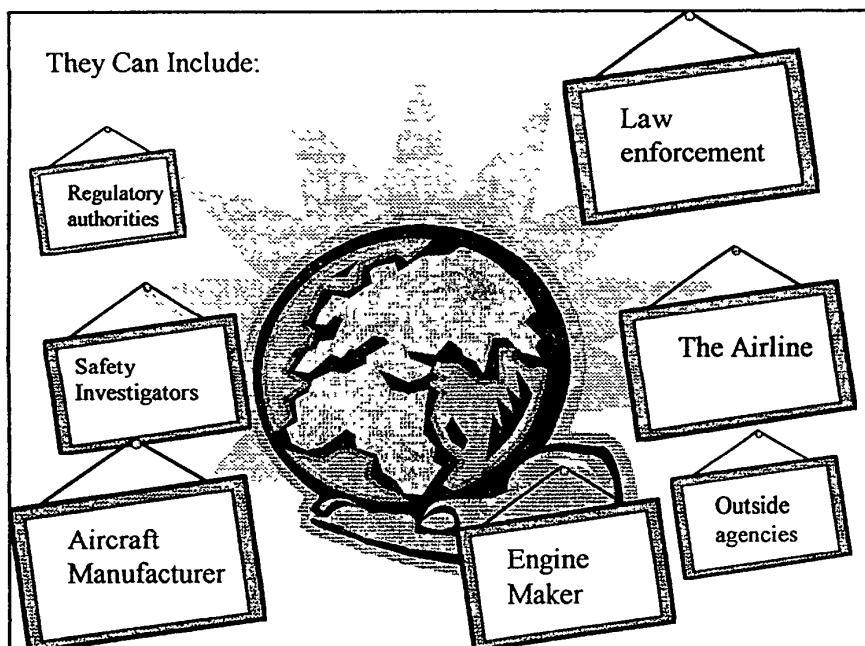
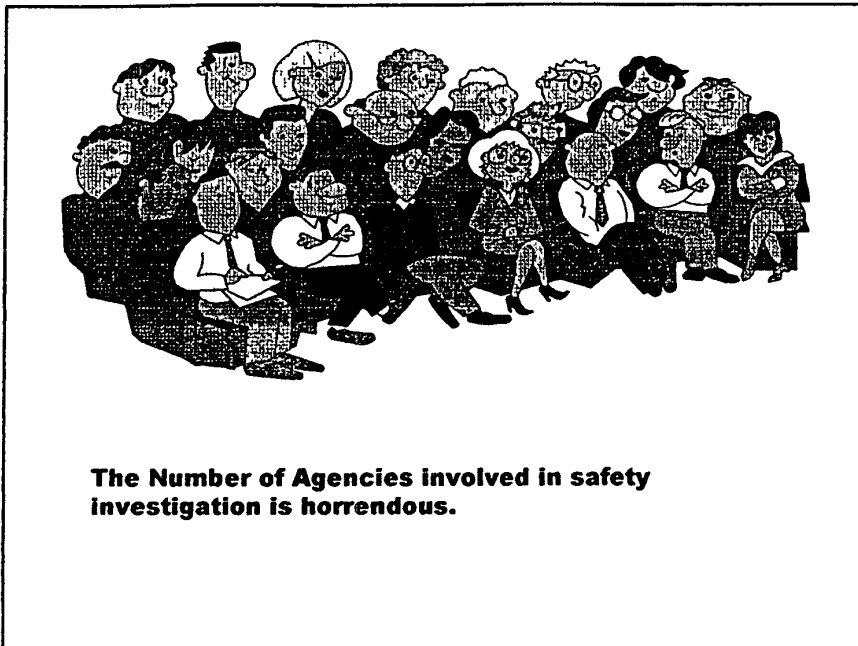
Safety is the number one priority at any airline...

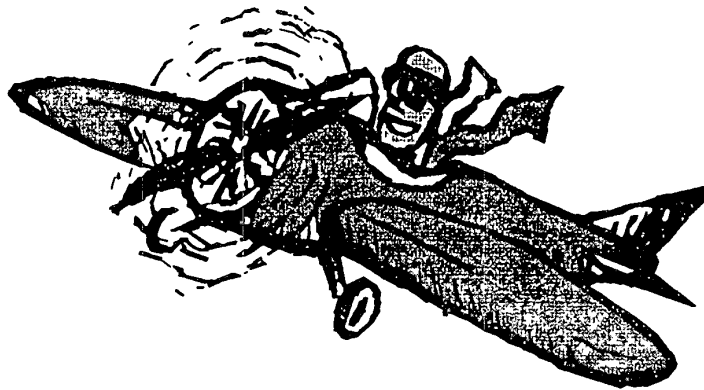


... But it is also the most sensitive issue to deal with

- **Who Do You Talk to?**
- **Access to the Crash Site.**
- **Understanding Safety Issues**





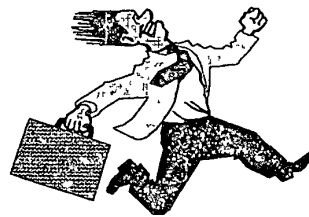


**If The Pilot survives the accident, You'll never Find Out
What Really Happened.**

A crash investigator who wished to remain anonymous



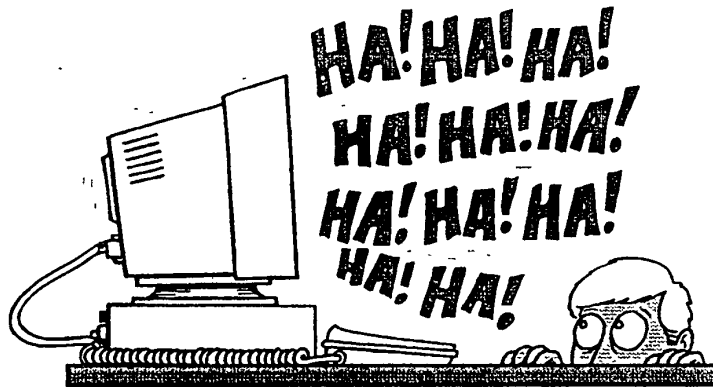
**Demands for Information
are often not met**



**The Story Will be
Written Anyway**

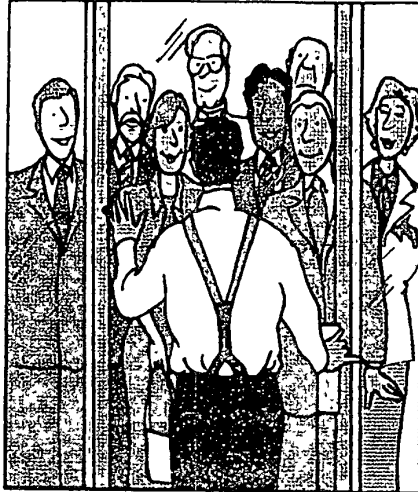


**There Are Times when airlines don't appreciate
media coverage!**



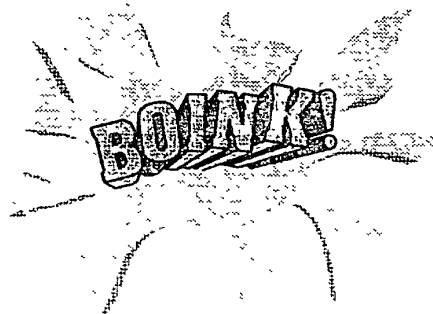
**No Quick Fix
But...**

- **Cultivate contacts**
- **Be patient**
- **Keep your cool**
- **Speak up at the news desk**
- **Don't be shy**



**“What is the Cause of Most Aviation Accidents?
Usually, it is Because Someone Does Too Much Too
soon, followed very Quickly by Too Little too Late”**

NTSB investigator Steve Wilson





Air Transport Safety Information
Seminar for Asia/Pacific Journalists
11-12 October 2001
The Regent, Kuala Lumpur, Malaysia

TOM BALLANTYNE
Chief Correspondent, Orient Aviation

Intro Slide 1

Slide 2

When it comes to airline accidents or safety incidents, being an “expert” or a “specialist” is a rather tenuous thing. A quick personal example. In December 1988 a Pan American Boeing B747 was blown out of the sky over Lockerbie in Scotland by a terrorist bomb, killing 259 people. Nearly eight years later, in July 1996, a TWA jumbo disintegrated shortly after take-off from New York, killing 230 people. I am regularly asked by radio and TV stations to give so-called “expert” commentary on such matters. Within hours of the TWA accident I was ready, as ever, to offer my opinion.

Basically, what this amounted to was that jumbo jets don't just blow up and drop from the sky all by themselves. Indeed, the crash appeared to bear striking resemblances to the Lockerbie incident, which had also taken place as the plane was climbing out over the Atlantic. There was a good chance TWA was also a victim, I declared.

While some debate continues on the cause, it appears I was wrong. It seems the TWA flight was destroyed by an explosion caused by jet fuel fumes in part of the aircraft's central tanks, ignited under unique conditions by a spark. That has led to the US Federal Aviation Administration ordering some redesign on these older jumbos.

There are two points arising from this that reflect some of the difficulties involved in covering safety. Firstly, the media often has such a difficult time getting official information they turn to other journalists – specialists like myself – to interview. Secondly, it clearly shows that when a crash happens, you can never, ever jump to conclusions.

Slide 3

The problem with airline accidents is there is nothing better designed to send airline executives scurrying for cover. Not surprising, considering “crash” equates to bad publicity, equates to nervous passengers, equates to falling profits. Unfortunately for journalists this means those you most want to talk to tend to clam up and bring down the curtain of caution and “no comment”.

Slide 4

Yet reporters themselves are under tremendous pressure, from news editors and editors, to come up with the “facts” and cover all the “angles”. An air accident is a highly dramatic event, one that will fill pages for days, even weeks. It sells newspapers and magazines and gets people listening to radio or watching television news. So how do you reconcile this lack of official information with the demand for words and pictures? More importantly, how do you do it honestly?

Slide 5

Safety, from an actual crash right down to the merest suggestion of a safety lapse, is undoubtedly one of the most sensitive areas to cover in the aviation industry. This is why reporting on accidents and safety is one of the most difficult tasks any reporter has to face. It is a subject fraught with complexity and potential for misunderstanding, partly because airline executives often don't understand the media and partly because the media in general doesn't understand safety issues.

Over the next few minutes I would like to go over a few of the pitfalls and areas of contention, look at the difficulties reporters have and those that airline officials have. I won't do it at length because the idea here is to give you an overview, a few thoughts, and then get into a discussion. We want to know what you want to know and we'll all try our best to answer your questions.

Slide 6

Generally speaking, there are three primary problem areas in covering air safety. They are:

- . Who do you talk to?
- . Getting Access to the crash site?
- . Understanding Safety Issues.

Slide 7

So who do you talk to? Well, for a start few realise how many different agencies become involved in a crash investigation.

Slide 8

It depends on circumstances of course but there will be the airline itself. Then the regulatory authority of the country in which the accident occurred, the regulatory authority of the airline's home country (if it's an international carrier) and local law enforcement agencies. Add to that the aircraft manufacturer (normally either Boeing or Airbus), engine makers such as Rolls-Royce or General Electric, the air safety investigation bureau of the country where the accident happened, which often calls in expertise from elsewhere, such as the US Federal Aviation Administration or Australia's National Transportation Safety Board.

Which of these holds press conferences, if they hold them at all, depends very much where you are. In the US, the FAA and the NTSB are pretty good at talking to the media. In some countries the role is taken up by the regulator which, consisting of bureaucrats, can be a bit thin on the information front.

Slide 9

Whoever talks, they do so with caution and for very good reason. They are all concerned about a number of things, ranging from hard facts, often in short supply during the early hours following a crash, to potential future legal problems. The truth is that the causes contributing to an accident can take days, weeks, months and sometimes years to emerge. They are subject to legal investigations, which puts obvious difficulty in the way of officials. It can also get cynical.

Slide 10

A crash causes the entire airline and those connected with it, including public relations personal, to move quickly into a period of shock typified by a reluctance to make many meaningful statements. Make no mistake, the airline industry itself is often uncertain of the approach it should take to accidents and air safety and to what extent they should confide in the media.

Slide 11

But reporters want information and a "no comment" doesn't mean they are not going to write a story. They are going to soak up bits and pieces of information from wherever they can get it and they are going to write their story anyway. Reporters are often forced to speculate, or use information from a single source that is unreliable.

Similar problems arise over gaining access to a crash area. Very difficult when law enforcement throws up a cordon around the area. I have known journalists to pose as emergency workers or even safety investigators to try and get closer. It is not only illegal, it isn't worth it because it can get you banned by those you need to have good relations with

Airlines also become very protective of relatives although here they have less control. Relatives, themselves sometimes starved of information, turn to the media and become a good source of news.

Overall, while there is a need for officials to be understanding of the needs of the press, there is also a need for the media to be understanding of the limitations of officials.

Slide 12

Finally, there is the question of understanding the issues. As in any industry, those involved often speak in a language hard for an outsider to understand. So how does a reporter come to grips with this and get to know enough to avoid making serious errors? And we are not merely talking about serious fatal crashes here. Some media coverage of so-called dramatic airline incidents causes a great deal of hilarity among airline people.

Take a “go around” for instance. This is where a jet coming in to land aborts that landing because the pilot sees there is still an aircraft on the runway, or he is unhappy with his approach path.

These are often published in newspapers as dramatic incidents, sometimes with passengers facing potential death or narrowly avoiding a crash. “Go arounds” don’t happen every day but they do occur relatively frequently. They are a non-dramatic event in the life of airlines around the world. It is a procedure practiced by every cockpit crew and the fact that they occur is proof that the safety system, more often than not, works well.

Slide 13

You may have noticed that I haven’t given you too many answers yet and that is because there are no real quick-fix answers to some of these issues. Instead I’d like to end up with a few pointers that may help in the coverage of air safety matters.

. The only real way to circumvent the problem of getting information – and I mean good reliable information - when a crash happens is to have good contacts in the airline, or within the aviation industry and its regulatory bodies. Contacts who trust you and will tell you things they know you may print but without revealing the source. Building up such contacts takes time.

. When a serious crash occurs you need to be patient. You need to be sympathetic with the officials, airline or otherwise, you are dealing with. Understand their problems and show you understand them. That way, they are more likely to be sympathetic to your problems

. Don't ever become angry with officials because they won't give you what you want. It is highly likely that this approach will result only in you being missed out when they finally are in a position to say something. Even with looming deadlines, patience is a virtue

. As a reporter it is your duty to tell your editor or news editor whether their interpretation of the story is wrong. I realise this may be difficult at times but you are the reporter who has gathered the information on the spot and knows the facts. If you feel they are over-dramatising events, or are misunderstanding the situation, let them know your opinion, if only for your own peace of mind.

. Remember that what initially appears dramatic to an outsider may well be par for the course in the airline industry. Make a point of getting someone – at the airline or in the aviation industry – to explain things to you in simple, plain language. Then you yourself will better understand what you are writing about.

If you don't understand something don't be shy to ask for an explanation. I've been covering this industry for decades and I still have to ask for clarification of things I don't understand on an almost daily basis.

Indeed, that is an area in which this IATA project aims to make an important contribution, by perhaps having a central information source manned by experts that journalists from around the world can call to clarify aspects of air safety and the issues involved

Slide 14

Like everyone else, airlines realise that life isn't perfect and aeroplanes, inevitably, have accidents. It was a US National Transportation Safety Board investigator, Steve Wilson, who asked and answered that simple question:

What is the cause of most aviation accidents? "Usually it is because someone does too much too soon, followed very quickly by too little too late."

When accidents happen airlines usually are not trying to hide things. Like everyone else, they are trying to find out precisely what happened so they can make sure it doesn't happen again.

Slide 15

Ends