



PLANE TALK®

Volume XXIII, Number 1

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Notice

The material in *Plane Talk*® is meant only as general information. In all cases no maintenance action published in *Plane Talk*® should be taken that is not in consonance with your particular company's operating and maintenance procedures, your approved maintenance manuals, or your certification agency's directives.

ARINC

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<http://www.aviation-ia.com/amc/>

2012 AMC — Anchorage, Alaska



ARINC Industry Activities is proud to invite you to the 2012 AMC-AEEC. Without question, this year is sure to be — *“another success story”* !

Last year's AEEC-AMC was attended by 781 aerospace professionals representing 44 airlines, six airframe manufacturers, and 175 avionics suppliers. Truly a world-wide event, attendees from 30 countries participated.

This year, Japan Airlines is hosting the AMC in beautiful Anchorage, Alaska. In addition to the four day technical conferences, there will be plenty of great opportunities to experience one of the last true frontiers.

Make your plans soon for what is sure to be an AMC to remember!

2012 AMC — Plan Now!
April 30—May 3, 2012
Anchorage Hilton, Alaska

Upcoming 2012 AMC

2012 Avionics Maintenance Conference
April 30 – May 3
Anchorage, Alaska



Sponsored by

Hilton Anchorage
500 West Third Avenue
Anchorage, Alaska 99501 USA
Telephone: (907) 272-7411
Fax: (602) 265-7044



JAPAN AIRLINES

2012 AMC Schedule of Events

| Sunday – April 29 | |
|-------------------|---|
| 1300 | Early Registration |
| 1700 | Registration Closes |
| Monday – April 30 | |
| 0645 | AAI Breakfast |
| 0745 | Registration Opens |
| 0930 | Opening Session |
| 1020 | Industry Session |
| 1050 | AMC Discussion |
| 1200 | Lunch |
| 1330 | AMC Discussion |
| 1520 | Symposium – Requirements for and the Management of Design and Maintenance Data relating to Intellectual property |
| 1630 | Recess |
| 1645 | Registration Closes |
| Tuesday - May 1 | |
| 0645 | AAI Breakfast |
| 0745 | Registration Opens |
| 0830 | AMC Discussion |
| 1200 | Lunch |
| 1330 | AMC Discussion |
| 1520 | Symposium – Solutions to go “floppy-less” and Introducing e-Enabled Aircraft |
| 1630 | Recess |
| 1645 | Registration Closes |
| 1800 | AAI Exhibit/Reception |
| Wednesday – May 2 | |
| 0645 | AAI Breakfast |
| 0745 | Registration Opens |
| 0830 | AMC Discussion |
| 1200 | Lunch |
| 1330 | AMC Discussion |
| 1520 | Symposium – RFID Requirements for Future an historical Applications with Status of FAA Form 8130 |
| 1630 | Recess |
| 1645 | Registration Closes |
| Thursday – May 3 | |
| 0645 | AAI Breakfast |
| 0745 | Registration Opens |
| 0830 | AMC Discussion |
| 1200 | Lunch |
| 1330 | AMC Discussion |
| 1630 | Adjourn |

Event Locations

Sunday - Thursday AMC Registration Egan Convention Center
 Tuesday - AAI Exhibit/Reception Egan Convention Center

Coffee Breaks

Coffee breaks will be provided daily at approximately 1000 and 1500.

AMC Follow-Up Items

The responses to most AMC discussion items result in a solution being accepted and the discussion item being closed. The following list identifies those discussion items still unresolved at the time of publication of the 2011 AMC Report.

| ITEM | SECTION | SUBMITTER | SUPPLIER | ACTION |
|--------------------------------------|---------------------------|-----------|----------------------------|--|
| 07-192 | Engine Systems | DAL | Boeing Precision Mech | Boeing to provide a timeline for Level 3 CMMs on the thrust control module |
| 09-140 | Navigation Systems | JAL | Honeywell | Honeywell to provide resolution to the IRU removal due to the nuisance input electronics fault |
| 10-163 | Navigation Systems | JAL | Boeing | Boeing to resolve the failure of radio altimeter antennas |
| 10-169 | Navigation Systems | LHT | Honeywell | Honeywell to advise LHT on EGPWC nuisance messages |
| 10-183 | Autoflight System | UAL | Rockwell Collins | Rockwell Collins to resolve NFF issue with MCP panels |
| 10-207 | Fuel Systems | JAL | ITT | ITT to provide resolution on Fuel Valve Actuator |
| 11-001 | Avionics Mgt & Philosophy | DAL | All | Suppliers to answer on using OEM data without operators' consent |
| 11-020 | Avionics Mgt & Philosophy | FDX | HNY, Boeing | Suppliers to research quality of solder joint integrity |
| 11-045 | Product Support | SWA | Honeywell | Supplier to answer on use of HHMPI in Flight Data Recording Systems |
| 11-056 | Product Support | DAL | Leach Intl, Boeing | Suppliers to solve issues with repair procedures of relay in CMMs |
| 11-067 | Product Support | OZW | Rockwell Collins | Supplier to provide software - TDR-94/94D Test Software not available – 2005 vs. 2010 |
| 11-104 | Test Systems | AVEOS | Vibro-Meter | Suppliers to provide test procedures for test bench equipment |
| 11-113 | Communication Systems | DAL | Cobham/Satori | Produce SB on audio control panel from AIRBUS – PN ACP2788AF01 |
| 11-114 | Communication Systems | JAL | Honeywell | SATCOM SDU – SB to solve low MTBUR on Amp and CPLD |
| 11-152 | Navigation Systems | DAL | AIRBUS Rockwell Collins | Suppliers to solve Radio Altimeter issues |
| 11-154 | Navigation Systems | UAL | Rockwell Collins | Chronic PA Fault on 4 DME-900 units |
| 11-164 | Navigation Systems | UAL | Honeywell | Supplier to solve heat issues in scanner assy motors |
| 11-168 11-169 11-170 11-175 | Navigation Systems | FDX, HAL | Honeywell | Supplier to solve issues with VIA system – PN 4081580-903 |
| 11-173 | Indicating Systems | DAL | AIRBUS, Sagem | Suppliers to solve issues with DFDR system – PN ED48Ax00 |
| 11-174 | Indicating Systems | DAL | Meggitt Vibro-meter | Suppliers to solve issues with Electric Clock and CMM procedures |

AMC Follow-Up Items (continued)

| ITEM | SECTION | SUBMITTER | SUPPLIER | ACTION |
|--------|------------------|-----------|--------------------------------|--|
| 11-184 | Flight Controls | DAL | MOOG, NHA, Kavlico | Suppliers to solve issues with Spoiler PCU and RVDTs |
| 11-187 | Flight Controls | UAL | Goodrich | Supplier to provide repair solution for thrust reverser pressure switch issues |
| 11-188 | Electrical Power | DAL | Hamilton Sundstrand | Supplier to solve issues with Charge Pressure Switch – REPEAT Item |
| 11-190 | Electrical Power | ANA | Hamilton Sundstrand | Supplier to solve issues with VSCF CNVTR |
| 11-198 | Fuel Systems | DAL | Hamilton Sundstrand Textron | Suppliers to solve issue with EHSV and FCU 827104-1 |
| 11-201 | Fuel Systems | KAL | Zodiac Aerospace | Supplier to investigate NFF repair cost of FQIS Computer – SIC 5077-3 |
| 11-202 | Fuel Systems | DAL | GE Aviation | Supplier to produce equivalency of FQIC circuit cards |
| 11-205 | Landing Gear | ANA | Messier-Bugatti | Supplier to investigate root cause of failures of BSV/BSCU |
| 11-214 | Lighting | PIA | Air Precision | Supplier to produce parts list and drawings of power supply PSB |
| 11-216 | Lighting | UAL | Honeywell | Supplier to investigate root cause of strobe light assy failures |
| 11-223 | Other (Misc) | HAL | Hamilton Sundstrand | Supplier to investigate root cause of failures of PRSOV PN 802170-10 |

AMC - Registration Information

Important Dates to Remember

Hotel Reservation Cut-Off April 9, 2012

How do I receive a copy of the AMC Program – Attendees are responsible for downloading the AMC Program of discussion items and bringing it with them to the conference. It will be available in mid February 2012 and can be downloaded at:
<http://www.aviation-ia.com/amc/upcoming/index.html>.

How do I register - To register for the AMC, please visit us at:
<http://www.aviation-ia.com/amc/upcoming/index.html>.

How do I obtain a hotel room - The Hilton Anchorage is the site of the 2012 AMC. Hotel reservation links are on the AMC website at:
<http://www.aviation-ia.com/amc/upcoming/index.html>.

AMC - Supplier Hospitality Information

Hospitality and Events –Many suppliers wish to meet with customers during AMC and are planning hospitality suites to demonstrate their products. To maximize the opportunity for your customers to visit all of the hospitality suites, suppliers are kindly asked to refrain from holding any events, dinners, etc., outside the hotel.

AMC and AAI - The Airline Avionics Institute (AAI) is an independent organization of avionics suppliers. AAI is a membership organization with dues and other membership requirements. Although AMC encourages suppliers to join AAI, AAI membership is not required to attend and fully participate in all AMC activities.

AAI Exhibit/Reception - The AAI Exhibit/Reception will be held on Tuesday, May 1, 2012, at 1800 hours.

Walt Roney, AAI's Business Manager, coordinates details of the reception with the hotel. Manufacturers who wish to be included as a sponsor of the Exhibit/Reception should contact:

Walt Roney
AAI Business Manager
+1 941-313-0471
walt@airlinesavionics.org
www.airlineavionics.org

AMC Preview

AMC Hospitality Suites - All AMC hospitality activities will be held at the Anchorage Hilton. AMC blocks several suites for this purpose with the hotel. The suites are assigned on a first come, first serve basis to any supplier. Persons desiring a hospitality suite should contact:

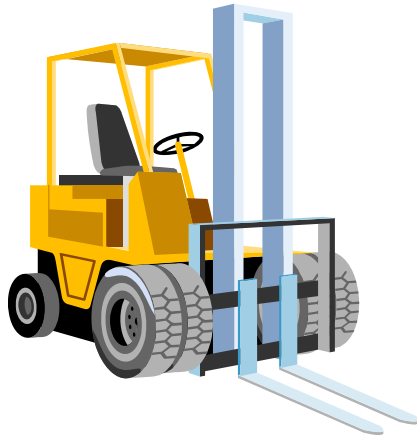
Anne Hulsether
Director of Catering
Hilton Anchorage
500 West Third Avenue
Anchorage, Alaska 99501
tel: (907) 265-7167
email: anne.hulsether@hilton.com

All attendees are invited to visit the hospitality suites.



View of the AAI Avionics Showcase at the 2009 AMC

Shipping to AMC?



AMC Shipping – AMC has selected Transit Air Cargo as the official freight carrier for ground and air shipments, as well as storage, delivery, pickup, and reshipment.

Howard Umeda

Transit Air Cargo

Tel +1 800 247-1600, Ext 106

Fax +1 714-571-0406

howard.umed@transitair.com.

Transit Air Cargo will handle air and ocean shipments, including the inbound and outbound customs documentation.



Operator Preparation for AMC

By Mitch Klink
AMC Chairman

Prior to attending AMC, it's important to download the 2012 AMC Program from the [AMC Index Page](#) on the AMC website.

Be sure to print the 2012 AMC Program and bring it with you to AMC since ARINC Industry Activities no longer provides hard copies of the Discussion Items as part of registration.



The Excel version of the Discussion Items is useful for a cut/paste of the PNs into your internal materials system to determine if issues raised by other operators apply to your organization as well. This file can also be found at the [AMC Index Page](#). If you determine specific PNs planned for discussion are flown on your fleet types, contact the appropriate Engineering, Reliability, Material, and/or Maintenance personnel at your airline for research and data so you can support other operator's items on the floor of Open Forum.

Remember, as a representative of your airline at AMC, it's important to support the Discussion Items from other operators, as applicable, so the suppliers and airframers are sent a clear message when there are technical issues requiring resolution. The saying "*You get out of it what you put into it*" is especially true for AMC. You'll notice that the more you contribute to the dialog supporting other operators, the more you're likely to have the favor returned.

Following the Open Forum during the day, you'll have a chance to meet the suppliers in their hospitality suites after hours. This environment is on a more personal level, and we encourage you to attend as many suites during AMC as you can. The product demonstrations in the suites are an excellent learning tool. Getting to know the folks you do business with throughout the year will help foster your efforts for problem resolutions via email and phone.

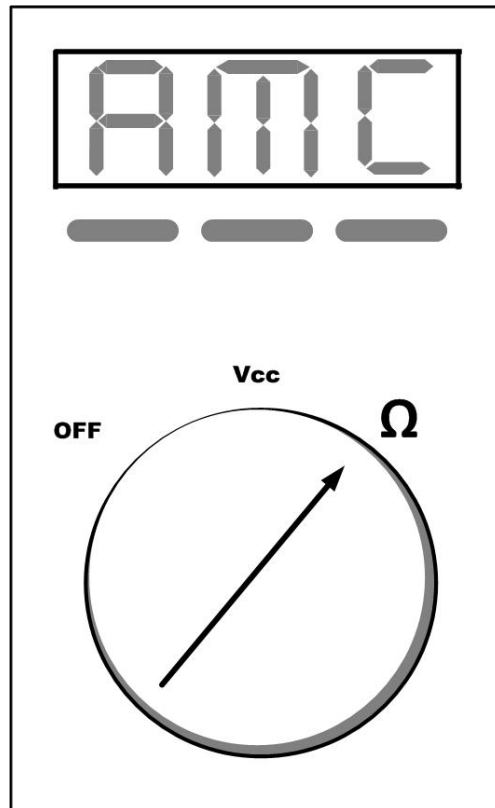
Often times, the suppliers will ask you for contacts within your airline if they want to discuss issues that might not necessarily be your area of expertise. Be sure to bring lots of your own business cards, and try to take notes on business cards given to you by the suppliers so you can pass them on to personnel back at your home base. Networking and establishing good working relationships is a valuable asset of AMC.

Since the hospitality suites are furnished by the suppliers for night time activities, we discourage you from accepting invitations to leave the hotel for dinner or socializing outside the hotel during suite hours as it has been a Martin Story mantra: "You have 360 other days of the year to go out and eat".

Industry Highlights

We look forward to another successful AMC in Anchorage, hosted by Japan Airlines. Following the above protocols will keep you coming back for future AMCs, and you'll be valued as a productive member of the AMC fraternity.

M.K.



Aerospace RFID Takes Off

By Emily Feliz
Editor in Chief
Avionics Magazine

The adoption of radio frequency identification systems for flyable components on aircraft is growing, as aircraft manufacturers, avionics companies, maintenance professional and operators look to improve management of their assets.

Tim Butler, president and CEO of RFID chip manufacturer Tego, of Waltham, Mass., said he sees the need for a wide range of aerospace components – smaller memory for relatively low-maintenance components like life vests and oxygen tanks, and higher memory chips for more dynamic parts like engine parts and avionics systems.

“The aerospace industry is leading the paradigm shift in RFID,” Butler said. “RFID had been thought of as simply a way to replace bar codes, and really it is another way to communicate and what we’re doing is enabling you to communicate with billions and billions of new assets in ways that you never could before. We’re really just at the beginning of understanding what that means.”

The company in October released its TegoChip 2000, a 2 kilobit RFID chip for tagging aircraft parts that require only record birth, record storage and identification. Tego said the TegoChip 2000 is the first RFID chip to fully comply with the Air Transport Association’s (ATA) Spec 2000 “low memory” format. It also meets to AS5678 RFID tagging standard for flyable parts. Tego also manufactures 4- and 8-kilobyte chips to manage larger amounts of data, and sees the need in the future for even higher memory and better performing chips.

“For aerospace, RFID chips can keep a lot of information on that asset itself and have additional functionality on that asset that they couldn’t have before and do it in a much more cost-effective, and a much more highly efficient way,” Butler said. For example, “Rockwell Collins can build a part for an Airbus plane that goes into the United Airlines fleet that gets serviced eight years later somewhere in Malaysia and the actual service information about that part can be on the part and the person who is actually servicing that part can do something valuable with that information, whereas up until now that information doesn’t exist in any sort of centralized place.” This information, Butler said, is available via “cloud computing” applications.

In 2010, Airbus placed a multi-year order to equip its coming A350 XWB with RFID tags on up to 3,000 components parts to support aircraft configuration management, line maintenance, warehouse logistics, payload tracking and life limited parts monitoring.

Reprinted with permission: Avionics Magazine, December 2011

Industry Highlights

Let's Go To Anchorage

By MJ

AMC Vice Chairman

There is a cold place in Alaska: Anchorage (officially called the Municipality of Anchorage). It is the northernmost major city in the United States. With 291,826 residents in 2010, it is Alaska's largest city and constitutes more than 40 percent of the state's total population; amongst the 50 states, only New York has a higher percentage of residents who live in the state's largest city. Anchorage has been named All-America City four times, in 1956, 1965, 1984/1985 and 2002, by the National Civic League. [3] It has also been named by Kiplinger as the most tax friendly city in the United States.

In 1867, U. S. Secretary of State William H. Seward brokered a deal to purchase Alaska from a debt-ridden Imperial Russia for \$7.2 million (about two cents an acre). In 1912, Alaska became a United States territory.



It is time to pack up and go to AMC.

Although the climate is called the subarctic climate or boreal climate, it is a climate characterized by long, usually very cold winters and short, cool to mild summers. By the time that AMC begins, we can expect the temperatures between 4 and 13°C (39 and 56 degrees F). The record extremes for May are -17 and +28°C. Never the less, Anchorage will be the hottest place in universe by April 30th 2012. And it will stay like that for 4 days.

Why should you go to the frontier of human civilization? It is cold, full of polar bears, violent climate, and far away from our crowded world. Well AMC is a good reason. All vendors and major airframers will be there. You should also go. Now, when people are talking about reduction of costs in aviation, it is time to do some serious business. The only place that can help you reduce the costs is the AMC, and the AMC is in Anchorage.

It will be the place where east can meet west. Many Asian operators will be able to come because the AMC is closer than ever. Others will have a hard time figuring out how to fly to Anchorage. (Check the site: <http://dot.alaska.gov/anc/>). Most of flights are going via Seattle. So that problem is solved.

Before the AMC, you should do one important thing. Make a list of items you want to discuss with the OEM's in the hospitality suites. With this you can do your business more efficiently.

By check in, you will have the small book with information. Find the page with a list of suites. That will be your guide to success. Once you are there, you can take your list with the items you want to discuss with OEM's, match it with a list of suites, and you are in business. It is about simple items: "I ordered a part and the lead time is too long. Can you help me to improve it?" "The part is obsolete according to your web site. Can you help me to get it after all?" "What is the telephone number of your rep in Europe." Etc., etc.

Don't forget that the most important evening is on Tuesday. Tuesday evening is the AAI reception. That is the place to be. Even more important and interesting than polar bears, the evening can save you enough cash to be able to go to the next AMC. One of the tables at AAI reception will be your lucky table. You will learn how to save money by doing smart new things. I hope that you will run into more than one opportunity to score some ideas which will save cash for your Airline or MRO.

AMC is also very dangerous for newcomers. If you attend it only once you will be addicted to it. Once you are there, you will never wish to go back and we will see you at next AMC. It is just that simple.

And now a few words about the host airline. As you can read, the host airline is JAL.

It is the flag carrier of Japan, and its main hubs are Tokyo's Narita International Airport and Tokyo International Airport (Haneda Airport), as well as Nagoya's Chūbu Centrair International Airport and Osaka's Kansai International Airport. The airline and four of its subsidiaries (J-Air, JAL Express, JALways, and Japan Transocean Air) are members of the Oneworld airline alliance. JAL was established in 1951 and became the national airline of Japan in 1953. After over three decades of service and expansion, the airline was fully privatized in 1987. In 2002, the airline merged with Japan Air System, Japan's third-largest airline, and became the sixth largest airline in the world by passengers carried.

Many of our fellow engineers from JAL will be in Anchorage. Take a moment to say, "Hi," and thank them for hosting the AMC. Once you start a discussion about airplanes, you will see that they have exactly the same issues with CMM's, LRU's, and airplanes you do. We all are one big avionics family.

Be aware that the AMC is your conference. You can save money for your company, and you can be part of it. If you will be there, all vendors will be there and the conference will be a success. Last time we had more than 700 attendees. That number means a lot in my opinion. You can hardly find a conference so well attended and so useful. Every buck you paid for the ticket will be earned back. The money is waiting for your airline and you just have to go to Anchorage and collect it.

At the end, do me a favor. Talk to your friends and tell them to go to AMC. Tell them also that they can be part of our community by signing up and supporting Industry Activities. Let them

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contact ARINC and go for it. At the last AMC, I saved \$150K USD for my company by solving a problem. That is not an isolated case. Find me at AMC, and I will tell you what I have done.

The final thought:

AMC is the best thing that will ever happen to you. Go for it. Although it is in Alaska, don't be afraid of polar bears, volcanos, earthquakes, and cold. You will be among friends. And friends help each other, not only fighting the bears but also fighting against problems in our great industry.

MJ
AMC Vice Chairman

The Human Face of Six Sigma

By MJ
AMC Vice Chairman

I wanted to write a positive article about the human face of lean six sigma because I really see the big picture and of course the benefits of lean six sigma. However it is my nature to mention the truth. The lean six sigma is now arriving in the new phase: the phase with a human face. It is funny to see the broad acceptance present in the work force because if you do it right and with a human, face it brings the success.

I know what is wrong with six sigma's image. First, six sigma black belts were on the wrong path for aviation. They wanted to analyze, measure, and improve, but that was all just theoretical drivel.

We, the engineers and technicians, were making jokes and laughing about their new theories. We frustrated them, but they had better access to the higher management. In that situation, and to prove that six sigma was working, they celebrated success after success which later became failure after failure. Their approach was wrong, and they created the gap between themselves and skeptical engineers. To silence us engineers (the disbelievers), they played a dirty game. They made the expression "You are either with us or against us" into a corporate policy.

But believe me, there are no engineers against analyses, measurement, and improvement. Engineers breathe analyses, eat measurements, and burp improvements! That is how they operate.

But, *I know best and you should listen to me* never did and never will work with engineers. Why? Because, engineers do the work and know best. And as long as both sides have the same polarization, engineers and six sigma black belts will not attract each other, just like we know that the same magnetic poles will never draw each other, only repel. Unless you do it right, six sigma and technicians can only repel each other.



First and foremost, let's make clear that six sigma in maintenance is not the same as six sigma intended for production processes. If you fabricate 10 million cars, you should adjust your process to prevent bad fabrications. If you are accurate, there will be no waste. If you build 10 million cars, you can adjust your process so well that there will be no more than 3 bad cars in 10 million. That is what they call theoretical six sigma. I say theoretical because

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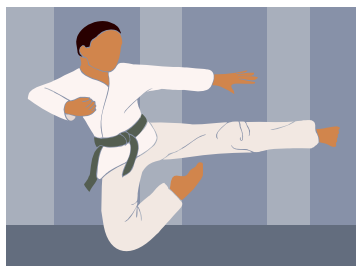
large auto manufacturers have shown that they cannot achieve the six sigma numbers (one failure in 3.5 million). There is proof of that. Some have had to modify millions of cars meaning that their six sigma failed. So let's stop the non-working theoretical six sigma stuff and forget all car manufacturers who were promoting six sigma and in the end showed that, whether you like it or not, it is not working.

But the logical question is "what is actually working?"

It took me 5 years to ascertain. At a certain moment, I met a black belt with who was not in the clouds with all the theoretical drivel. The theorists were focusing on statistic, data crunching, calculations of "voice of the customer", and more of the theoretical stuff. They were saying all the time that they were listening to what technicians were saying, but they were not.

However, this new six sigma philosopher was different. He was joking about theoretical six sigma, but he himself was very pragmatic. He organized the kaizen event, talked to the techs, and within a few days there was acceptance and the technicians and engineers were cooperating instead of opposing it. The philosopher analyzed the situation together with the techs. He designed the spaghetti chart of the department, walked through the process, and together with technicians identified the waste. After that they decided what to do to eliminate the problems. In a few days, the plan for redesign was completed.

6σ



It was obvious that the department was changing and improved just by moving furniture and repositioning the test sets; introducing a few new items; improving lighting; scrapping a lot of old cupboards and un-used test sets; and adding a few computers, printers, and some other minor items. One example of efficient repositioning of furniture saved the guys 15 hours per week (the complicated spaghetti chart was not complicated any more) which saved 750 man-hours per year. Using your own shop's hourly rate,

you can calculate the financial savings. The money was enough to finance the replacement of furniture, improving lights, and installing 6 more computers. Eliminating waste is called leaning of the department. The people working in the department were happier, and happy people produce quality and quantity.

This philosopher gave a human face to lean six sigma. He was able to speak the language of the floor and help technicians to work more efficiently. They were not frustrated anymore by waiting to get access to the computer, waiting for materials, or having problems working in low visibility.

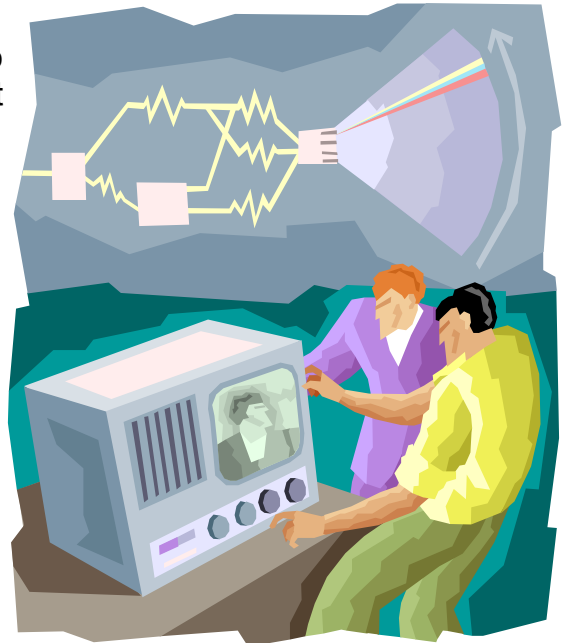
The acceptance was 100% because the technicians were able to see results in just a few weeks. Productivity increased and savings in Turn Around Time (TAT) was almost instant.

That is what I call six sigma with human face.

That is why I have a revulsion to those black belts who show up and start to sell the theoretical drivel but are unable to see the big picture. Human nature is to work as efficiently as possible. We all created the big and complicated process, and when the same technicians are forced to fill up a lot of forms and make a lot of unnecessary movements, we can't expect that they will be cooperative and happy. But if you help them to create a nice, clean, light, and lean working area, they will endorse it and give you back the quality, efficiency, and quantity. That is the human face of six sigma.

Just to mention a few effects of leaning the shop by a black belt with a human face:

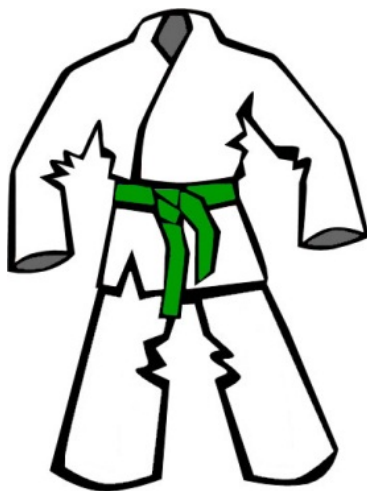
- The shop as a whole will fix all backlogs and determine they have significantly more time to do more work. The shop was not able to manage the six sigma triangle. The work was coming in and there was too much waste. Therefore, the TAT was out of control. Now they are asking the development department to develop more capabilities because they need more work.
- They are also complaining to sales department that they are not selling enough because not enough work arriving in the shop.
- The inventory department will have overstock of some LRU's because, due to improved TAT, there is no need for so many LRU's in the pipeline.
- The stores will complain that they have no storage space. Remember all the stuff was in the shop waiting to be repaired? It is now repaired and in the stores.
- The neighbor departments will start to complain to management that they also want a kaizen event and lean activity. They want more computers, more light, and repositioning of furniture and test sets. They also want to be efficient, and they want to eliminate waste.
- The whole department is peaceful. They do their work and have time to fix the most difficult problems. They even have time to think about possibility of doing a proposal to engineering to accomplish repairs of piece parts which were for many years non repairable. That is saving a lot of cash.
- The department has more time to solve no fault found problems in LRUs which were giving them problems the last few years.



The effect of six sigma philosopher with a human face is great. Suddenly the bad image of six sigma theoretical and statistical drivel is turned upside down, 180 degrees. The technicians and engineers actually want to be leaned. They want to be efficient and they want to prove that they are good. Isn't that wonderful? The same guys who were exhausted due to a lot of overtime hours are repairing

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more LRU's per months than ever before but this time without working overtime. The whole department is happy. And as I said, the happy boys and girls are producing quality.



And now we are at the point that some of our managers need a six sigma lesson. Until now, they were pretending that they understood the lean principles. But some of them are now proving that they are actually bean counters not seeing the big picture. Yes, I will admit that the whole process costs some money in the first place. But don't forget the large pile of cash that the lean shop is bringing back.

At the moment, that shop is cleaned up and leaned. They are proud of it, and management brings tour after tour to show their new baby. But when they hear that another shop wants a kaizen event and want to be leaned, they start to complain that people are using six sigma lean principles to get money to redecorate their shop. They are actually missing the big picture.

Now we notice that there is another group of people in opposition: the bean counters. Due to their bean counters attitude, the progress is slowing down. They still don't understand that you have to spend money to be able to earn money.

Here is the example of unwanted behavior. The professor of a university somewhere in Europe made a calculation for me. He calculated that if an operator flying 25 wide body aircraft improves the efficiency of their operation by 1% by eliminating waste in their processes, they will reduce costs and decrease spending by 35 million USD per year. He was convinced that the bean counters will disapprove his idea to invest 20 million USD in getting more efficiency and give 15 USD million to the bean counters as profit. Whether the story is wrong or true, I don't know.

We obviously cope with the image problem of technical people. The stuff is difficult and therefore nobody trusts the numbers. The same guys will easily approve investment in new curtains in the fleet (for 5 mil) without discussion. It is just the way it is. Therefore enjoy for the moment the good developments regarding lean six sigma with a human face.



Levels of Maintenance (LAM) and Test Equipment Guidance (TEG) Working Group

by Sam Buckwalter
ARINC Industry Activities



The Levels of Maintenance (LAM) and Test Equipment Guidance (TEG) Working Group met November 15-17, 2011, to review **ARINC Report 602B: Test Equipment Guidance** and **ARINC Report 668: Test and Tool Equipment**.

ARINC Report 602B: Test Equipment Guidance

ARINC 602B provides basic definitions and information about test equipment guidance. It represents an important part of the ARINC guidelines related to component maintenance. The rework of ARINC 602A was initiated through an AMC symposium titled, "Use of Aircraft Parts as Test Equipment."

ARINC Report 668: Test and Tool Equipment (TTE)

Axel Mueller reported that the AMC Steering Group voted unanimously in favor of approving the APIM on updating ARINC Report 668 and that the work of updating ARINC Report 668 should be encompassed in the LAM/TEG Working Group.

Axel reported that review and feedback from the industry indicates that the current requirements for TTE equivalency within ARINC 668 might be too stringent, i.e., imposing unnecessary effort for implementation and operation of ARINC 668 related processes.

A rework of ARINC Report 668 will provide a new philosophy regarding TTE equivalency determination:

- Detailed equivalency determination including documentation will only be necessary for TTE involved in Return to Service Testing (RTS) and those TTE critical to safety, performance, and cost.
- Equivalency of other TTE will be covered by defined procedures (e.g., standard practices) based on the quality manual of the individual maintenance organization.

FCM Activities

- Review ARINC Report 668 to ensure accuracy and consistency with evolving industry practices (scheduled review after 5 years).

The update is intended to ensure the continued viability of ARINC Report 668 throughout the Air Transport Industry and a simplified way of performing TTE equivalency determinations without compromising safety issues related to equivalent TTE usage. The initial review of ARINC Report 668 will take place at the next meeting of the LAM/TEG Working Group.

The group assigned action items and set milestones to accomplish the work plan of the group. The next meeting is tentatively scheduled for March 13-15, 2012, in Hamburg, Germany.

For more information, please see the ARINC IA website:

http://www.aviation-ia.com/amc/projects/lam_teg/index.html



Study for Cost Effective Acquisition (SCEA) Working Group

by Sam Buckwalter
ARINC Industry Activities



Who Should Attend

The meeting should be attended by engineers from airline shops, MRO shops, purchasing departments, simulation departments, and airline system engineers, as well as people involved in contract activities (supporting activities or actual contracting).

Goals of SCEA

The purpose of the working group is to develop a study to help technical teams assist their respective procurement departments better understand internal requirements for aircraft engineering, aircraft maintenance, and training devices, taking into account the life cycle of the aircraft. Some of the issues to be addressed are:

- Definition of a basic Product Support Model to illustrate the essential mechanisms that facilitate and ensure seamless and economical maintenance support throughout the equipment and aircraft life cycle.
- Take into account the requirements for support for aircraft engineering, aircraft maintenance, and training device acquisition and operation initially and over the life cycle of the aircraft or modification at the time of initial procurement.
- Definition of a basic Aircraft Operational Model.
- Definition of a basic Aircraft Life-Cycle Cost Model.
- Reference ARINC Specifications and Guidelines to facilitate an assessment of the economical and strategic advantage of those standards.
- Creation of a checklist of items essential for aircraft operation, specifically Line/Component Maintenance.
- Creation of a checklist of items essential for Training Device design, manufacture, operation, and maintenance.

This standard is intended to be used by Airlines, Flight Simulation Training Device (FSTD) operators, Airframers, and Integrators, as they communicate their life cycle requirements to the procurements departments by the engineering, maintenance, and training communities individually.

FCM Activities

The SCEA Working Group is Chaired by Marijan Jozic, AMC Vice Chairman. The next meeting is tentatively scheduled for June 2012.

For more information, please see the ARINC IA website:

<http://www.aviation-ia.com/amc/projects/scea/index.html>



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ARINC Industry Activities Calendar

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|--|------------------|-----------------------|
| Airport Mapping Data Base (AMDB) Subcommittee | Feb 28 - March 1 | Toulouse France |
| Navigation Data Base Open Standard (NDBX) Navigation Data Base (NDB) Subcommittees | March 6-8 | Phoenix Arizona |
| Levels of Avionics Maintenance (LAM) Test Equipment Guidance (TEG) Working Groups | March 13-15 | Hamburg Germany |
| Electronic Flight Bag (EFB) Subcommittee | April 3-5 | Annapolis Maryland |

2012 AMC
April 30— May 3, 2012
Anchorage Hilton — Egan Convention Center

Mark the date and make your plans now!

<http://www.aviation-ia.com/amc/index.html>

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"Another Success Story!"

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