



TECHNICAL COMMITTEE NOTES 26th JANUARY 2017

Attendees/ Apologies	Dai	Whittingham (CP)	Chair	Present
	Marion	Wooldridge (CP)	Vice-Chair	Present
	Richard	Hall (CP)	Vice-Chair	Present
	Peter	Benn (CP)	Master	Present
	Chris	Spurrier (CP)	ME	Apologies
	John	Turner (CP)	DAA	Present
	Michael	Cleaver (CP)	Australia	IT prevented participation
	Nicholas	Clutton		Present
	David	Cockburn		Present
	Geoff	Connolly		Apologies
	Peter	Cox		Present
	Harvey	Crush		Present
	John A	Denyer (CP)		Apologies
	Alex B	Fisher		Present
	Nick	Goodwyn		Apologies
	Brent	Hawkins (CP)	Hong Kong	IT prevented participation
	Kent	Johnson (CP)	North America	IT prevented participation
	Richard	Lotinga		Apologies
	Chris	Norton		Present
	Phil	Smith		Apologies
	Miles	Stapleton (CP)		Present
	Syd	Utting		Apologies
	Tom	Harrison	GATCO	Present
1.1 Chairman's introductory remarks	<ul style="list-style-type: none"> Chair welcomed all and introduced Tom Harrison, Manager Professional & Legal for GATCO; apologies were noted. Once again, regional reps could not join as IT would not support SKYPE conferencing. A solution is being 			
1.2 Cameo	<ul style="list-style-type: none"> Capt Tilmann Gabriel – London City University – gave a thoroughly thought-provoking cameo (copy of slides on the website) Described the profession as it was – hands on, needing to keep careful watch on (e.g. engines, location, systems) as well as entertaining visitors who came to the flt deck. Now, the pilots kept in 'solitary' confinement with a monitoring task already covered by automatic warnings – stultifying! City University MSc are not typical BSc-MSc transition courses but are done by pilots, often without a first degree, who want to gain academic rigour in their aviation involvement. <ul style="list-style-type: none"> Now, many airlines, especially in those in the middle east, insist their pilots applying for management positions have an MSc City has facilities in London, Dubai Frankfurt. Next will be Nanjing & New Dehli – reflecting aviation growth in other parts of the world and desire to have a truly international programme. (Foreign students sometimes have difficulty to getting to UK.) Pilot & engineer shortage – will cost 5 trillion dollars in next 20 years to train pilots and engineers. Tilmann now chair of IPTA (which took over from IPTC under Peter Barrett – now vice chair) <ul style="list-style-type: none"> Focus on upset recovery, outreach & recruitment, Generation Alpha – born this century, growing up from toddlers with iPads, used to multi-tasking (reading book while watching TV) need a different approach from traditional 'training'. KHAN academy – developed Duolingo as a fun language learning package – reflect the move towards gamification – education through gaming In this context, the Simulator is 'serious gaming' 			

	<ul style="list-style-type: none"> • We have a mix of old and new pilots, doing what is often a boring job – so how do you keep the pilots engaged, how do you find enough people prepared to do it? • Looking at potential for a Bachelor degree plus ATPL course – to have 15 credit modules combined with the ATPL syllabus (University of Worms, GE is already doing this) City U investigating how to do this with gamification training leading up to an MCC final phase. • Returning to the pilot shortage <ul style="list-style-type: none"> • How do we find the 600,000 people needed in the next 20 years? – poaching is already going on – China is now hiring Captains at annual salaries in excess of US\$300,000 • Today's airline industry does not/cannot take care of its employees. – Average pilot changes employer 7 times – each time paying training costs that can amounts to US\$500,000+. • If the pilot was pampered a little bit, given a career path that would last a (working) lifetime and not cease age 60/65, a more engaging work environment, it might be easier to find people in the numbers needed. • US airlines already parking a/c because they do not have enough pilots. • Discussion: You don't have to find more pilots if you can engineer them out of the aircraft! • Effective pilot training <ul style="list-style-type: none"> • We don't have enough time to train everyone in everything that we know today. We need to shift to competence training so people have the confidence to think and act outside the box when the unexpected happens <ul style="list-style-type: none"> ▪ To adopt the Sully Sullenberger response the double engine fail rather than trying to get back to La Guardia, which most pilots would try to do. ▪ BUT: Regulators push risk onto the operators who push it onto the flight crew. So, rather than 'thinking outside the box' as Sully could, do people tend to stay in the box because the fear of litigation is higher than the fear of death? ▪ With the current model of the commercialized pilot – where pilots are required to self-fund their training – they become concerned only to know the exam questions & answers so they can pass the exam and avoid spending more money. • The BSc/ATPL approach steps away from that.
2. NOTES OF PREVIOUS MEETING & MATTERS ARISING	
2.1 Matters Arising - All covered below	
2.1.1 Topics for Discussion/ Personal Contacts	<ul style="list-style-type: none"> • TC member's topics following the last meeting's action are listed, arranged by subject below: <ul style="list-style-type: none"> • 8 x Drones – Drone pilot professional status/skills, Regulation, Better threat data, • 4 x Fatigue, Cumulative fatigue, • Position on further reductions in flight crew complement on 'quiet time' on long haul – only requiring one pilot to be awake. • Explain that EASA rules are a minimum not a target • Pilot mental welfare • Minimising erosion of handling skills • Cabin Air conditioning • Ground damage • Recruiting and retaining experienced FI who can teach IR/Twin • Use of RNAV/GNSS • Video recording - to confirm what the pilot sees is the same as the FDR • Next RW for SE England – LHR 3rd is not the final solution is another needed and if so where & when • RW utilization – why LHR3 if you can get the benefit for free? • Steeper approach – frees up airspace, decreases noise, • RNP Nav – over-regulated, which needs to be freed up • Geo Altitude • 2x Brexit • ATSOCAS • Glider site avoidance • Fly TRUE • Go public on our Instructors Guide – say we believe it is best practice. • Closure of small airfields in UK • CAA lack of resource • Mid Air Collision • Which to progress to be tbd after Air Pilot Strategy WG workshop in February.
2.1.2 SKYbrary	<ul style="list-style-type: none"> • Two upset recovery articles need review in light of ICAO-issued advice. (SKYbrary want to reflect the ICAO advice but we were not entirely in favour of the concept being proposed to ICAO.) <ul style="list-style-type: none"> ▪ David Cockburn & Richard Hall agreed to review - DAA to forward them the articles. • Previous meeting agreed to review articles as follows: <ul style="list-style-type: none"> ▪ G070 Engine Failure after Take Off – Light Twin Engined Aircraft <ul style="list-style-type: none"> ○ Martin Hatton of Instructors WG would be a good candidate ○ Nick Clutton would approach Duncan Wright at ETPS ○ Chris Norton agreed to arrange a review ▪ G074 Night Vision Imaging Systems (NVIS) <ul style="list-style-type: none"> ▪ DAA cautioned this needed much work to bring to an acceptable standard. <ul style="list-style-type: none"> ○ Geoff Connolly volunteered ○ Chris Norton volunteered, as would ○ DAA would when time permitted.

	<ul style="list-style-type: none"> G075 Rejected Take-off <ul style="list-style-type: none"> Nick Clutton volunteered DAA to Review status of all above DAA again reminded members that over 50 articles under Air Pilots 'Content Control' are listed at http://www.skybrary.aero/index.php/The_Honourable_Company_of_Air_Pilots. These have already been edited and then endorsed by the Air Pilots. Even so, we recognised at the time of endorsement that many were still only 'adequate' rather than being exemplar and we have an on-going requirement to keep all our 'Content Control' articles under review. All TC members invited to review SKYbrary articles under Air Pilots' Content Control at any time.
3. TOPICS FOR DISCUSSION	
3.1 Lasers Update	<ul style="list-style-type: none"> Working Group continues with a smaller team. Package of measures put to ministers, should be put to Parliament shortly (if not displaced by BREXIT) and could on the statute book by end of the year. Work ongoing separately to limit laser strength to 5mW. <p>Post Meeting Note: DfT has since announced that the Transport Bill will include a measure making it an indictable offence to direct a laser at any form of transport, punishable by a fine or up to 5 years imprisonment. The new offence means it will only be necessary to prove an attack took place for a prison sentence to be available.</p>
3.2 Fumes	<ul style="list-style-type: none"> TC still see engine-oil organophosphate poisoning as an incredible threat but the issue is a recurring. When flight deck & cabin crew need hospitalisation, why don't passengers seem to notice anything? <ul style="list-style-type: none"> A reflection of repeated exposure? UNITE members reported to have made 74 claims against airlines. DAA would seek update from UNITE and/or Rob Hunter of BALPA.
4. WORKING GROUPS (NOT COVERED ABOVE)	
4.1 WG - Court Admissibility of AAIB evidence	<p>Led by DAA</p> <ul style="list-style-type: none"> DAA statement was distributed to TC members by email. (Oct?) Maintaining a watching brief.
4.2 WG – True North (TN) Heading Ref for CAT	<p>Led by Miles</p> <ul style="list-style-type: none"> Miles worked with David Learmont to prepare an Article for Flight International Master asked on his tour whether there was interest in picking this up. Did not appear to be much interest – though Transport Canada are progressing this with ICAO. DAA/Clerk are meeting with RIN/IAIN in February
4.3 WG- Human Factors – Fatigue & FRMS	<p>Led by Nick Clutton</p> <ul style="list-style-type: none"> Australia CASA plan to run a major study on crew fatigue. Fatigue is one of top strategic issues for Transport Canada. CAP 371 work done by looking at sickness rates on BAE/BOAC schedules then watered down by Douglas Bader under the influence of the airlines. CHIRP have had several fatigue-related reports – people remain reluctant to report fatigued after a duty – would mean they were operating while fatigued! (However, it is now accepted that you could report for duty unfatigued and then become fatigued during the duty period.) Some airline crews reluctant to report – so the FTMS does not gather enough data to be effective. Paper currently on ...from the desk of DAA.. web page - DAA review/prep for wider distribution
4.3.1 Pilot Fatigue & Nutrition	<p>Led by DAA</p> <ul style="list-style-type: none"> Research work going well, academics pleased and gathering lots of data. They had requested additional subjects in 35-42 age range – DAA had asked that segment of our membership. Colgan accident led to families' consultancy presenting new rules to Congress who implemented them – so FAA fatigue rules are not what FAA needed but can't be changed! Usually you can't force a regulator to adopt what you want, but there are examples of effective influencing (ICAS v FAA) – easier if stopping a change rather than making one. FAA intend to become more involved in the safety cycle and serious NTSB topic. Self-assessment unreliable, – crew reaction time tests after a sector might provide better indication. NATS commissioned NASA study showed 50% of loss of separation events had a fatigue element. GATCO pushing for an open reporting system so that after incidents there is the option for the controller to mention fatigue. (Reporting for duty fatigued is an offence but CAA now accept that fatigue could develop during a duty period.)
4.4. Addressing 'skill fade' – a Low Cost Training Aid	<p>Led by Alex Fisher</p> <ul style="list-style-type: none"> Met with Graham Green – Head of Research at CAA who sounded positive during the meeting but then said, 'bring a funded response' There does appear to be appetite within the ultra-long haul operators – for people returning to flight deck after extended rest period. Will see if CityU tie-up is possible – Alex will approach Tilmann.
4.5 UK Flight Instructors	<p>Led by Syd Utting</p> <ul style="list-style-type: none"> Report from David Cockburn <ul style="list-style-type: none"> Group met 10 days ago. Refined a SKYbrary article on flying light a/c in 1500m VFR

	<ul style="list-style-type: none"> • New member provided threat & error management input of the instructors guide. • Forum on 4 Apr. Restricted number of topics to encourage proper discussion. Main subjects: <ul style="list-style-type: none"> • Low vis VFR • GPS use in VFR navigation • Hope Kelly Booth (CAA) will be able to speak • Asking for feedback on Instructor Apprenticeship. – DAA to ask Roger Gault for an update. • Concern that number/quality of applicants for instructor bursaries not visible to the group. • Could the scheme be directed more towards the teachers of the teachers to improve quality of student FI instruction – a training course for senior FI who want to instruct instructors? • WG members would be ready to do training day at locations around the country – doing instruction rather than GASCo safety. David to email proposal to Master, Clerk & DAA. 				
4.6 Air Pilots' Good Neighbour Initiative	<p>Led by Marion Wooldridge</p> <ul style="list-style-type: none"> • Need to keep airports open so being a good neighbour is important. Plan was to find out what was going on already but not enough people to get sufficient • GAAC do a lot of work in trying to protect airfields. Other orgs, HAA, LAA, BGA etc. have a lot of info so Marion will try to interview the organisations at a GAAC meeting, which Marion will attend • At present, the best advice is to 'own your own airfield'. There is a report that says airfields are 'described' rather than 'designated' as brown field sites – there is a difference. • Pressure for development – housing, other industrial plans. 				
4.7 Pilot Contracts	<ul style="list-style-type: none"> • Parked pending seeing how this fits with the outcome of the Strategic Working Group. 				
4.8 Unmanned Air Vehicles	<p>Chris Norton continues a watching brief.</p> <ul style="list-style-type: none"> • Gov Consultation ends 15 Mar 17 – all asked to respond – DAA will prep an Air Pilot response. • In NZ, flying a UAV over someone else's property is trespass and liable to civil prosecution. 				
5. Notices/Updates from other Committees, Events, etc.					
5.1 UK FSC	<p>Chairman</p> <ul style="list-style-type: none"> • Last meeting – as the papers provided • Meeting last week – papers will follow 				
5.2 GAP	DAA - Next Meeting Feb				
5.3 Met Users Forum	<p>Peter Cox</p> <ul style="list-style-type: none"> • Policy of removing forecasters from airfields now reversed – it seems the TAF is more accurate if there is a forecaster on site. (Several airfield operators started paying for their own forecasters). • Low temp altimetry: NATS will not apply the correction it is pilot responsibility. TC noted no accident has been reported because of temperature correction! • Pilots ability to interpret (e.g) TAFS and METARS appears to be degrading. • Volcanic Ash – UK and Buenos Aires taking a different approach to the rest of the world. 				
5.4 NATMAC	<p>Chairman</p> <ul style="list-style-type: none"> • October meeting – <ul style="list-style-type: none"> ▪ Heathrow 3rd has airspace implications(!) Final LAMP design driven by 3rd runway so will be done only when the runway is finally confirmed. ▪ CAA has some resource challenges & is recruiting! (incl Fixed Wing FOI) ▪ DGAC stats: you are 7-9 times more likely to have an accident on a non-precision approach. ▪ Canada's paper on True North was savaged at ICAO ▪ 'Nuclear restricted' airspace has been reduced. ▪ Advice to DfT on BREXIT to was 'stay with EASA' ▪ Lots of kites starting to be used for power solutions – kite power solutions! – fixed sites that are NOTAM'd when the kite is up. (All below 500' at present) 				
5.6 DfT/EASA Briefings	DAA - Next meeting 9 Feb – DAA plans to attend.				
5.7 Forthcoming Conferences	<ul style="list-style-type: none"> • As provided in pre-meeting papers: <table border="1"> <tr> <td>23 Mar 2017</td><td>MAA/CAA/BADA Pre-Season Display Flying Conference</td></tr> <tr> <td>18-20 April 2017</td><td>Unmanned Systems Asia</td></tr> </table>	23 Mar 2017	MAA/CAA/BADA Pre-Season Display Flying Conference	18-20 April 2017	Unmanned Systems Asia
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6. Any Other Business					
	Nil				
Next meeting(s)					
Next meeting	1330 16 May 2017, 12 September 2017				

Meeting Closed at: 1710