



TECHNICAL COMMITTEE

NOTES

28th JANUARY 2016

Attendees/Apologies	<table><tr><td>Dai</td><td>Whittingham</td><td>Chair</td><td>Present</td></tr><tr><td>Marion</td><td>Wooldridge</td><td>Vice-Chair</td><td>Present</td></tr><tr><td>Richard</td><td>Hall</td><td>Vice-Chair</td><td>Present</td></tr><tr><td>Chris</td><td>Ford (CP)</td><td>Master</td><td>Present</td></tr><tr><td>Peter</td><td>Benn (CP)</td><td>ME</td><td>Apologies</td></tr><tr><td>John</td><td>Turner (CP)</td><td>DAA</td><td>Present</td></tr><tr><td>Michael</td><td>Cleaver (CP)</td><td></td><td>Present by phone</td></tr><tr><td>Nicholas</td><td>Clutton</td><td></td><td>Present</td></tr><tr><td>David</td><td>Cockburn</td><td></td><td>Present</td></tr><tr><td>Geoff</td><td>Connolly</td><td></td><td>Apologies</td></tr><tr><td>Peter</td><td>Cox</td><td></td><td>Present</td></tr><tr><td>Harvey</td><td>Crush</td><td></td><td>Present</td></tr><tr><td>John A</td><td>Denyer (CP)</td><td></td><td>Present by SKYPE/phone</td></tr><tr><td>Alex B</td><td>Fisher</td><td></td><td>Present</td></tr><tr><td>Nick</td><td>Goodwyn (CP)</td><td></td><td>Present</td></tr><tr><td>Brent</td><td>Hawkins (CP)</td><td></td><td>Apologies - flying</td></tr><tr><td>Kent</td><td>Johnson (CP)</td><td></td><td>Apologies - overseas</td></tr><tr><td>Richard</td><td>Lotinga</td><td></td><td>Arriving late</td></tr><tr><td>Chris</td><td>Norton</td><td></td><td>Apologies</td></tr><tr><td>Phil</td><td>Smith</td><td></td><td>Apologies – appointment</td></tr><tr><td>Miles</td><td>Stapleton (CP)</td><td></td><td>Apologies</td></tr><tr><td>Syd</td><td>Utting</td><td></td><td>Apologies - flying</td></tr></table>	Dai	Whittingham	Chair	Present	Marion	Wooldridge	Vice-Chair	Present	Richard	Hall	Vice-Chair	Present	Chris	Ford (CP)	Master	Present	Peter	Benn (CP)	ME	Apologies	John	Turner (CP)	DAA	Present	Michael	Cleaver (CP)		Present by phone	Nicholas	Clutton		Present	David	Cockburn		Present	Geoff	Connolly		Apologies	Peter	Cox		Present	Harvey	Crush		Present	John A	Denyer (CP)		Present by SKYPE/phone	Alex B	Fisher		Present	Nick	Goodwyn (CP)		Present	Brent	Hawkins (CP)		Apologies - flying	Kent	Johnson (CP)		Apologies - overseas	Richard	Lotinga		Arriving late	Chris	Norton		Apologies	Phil	Smith		Apologies – appointment	Miles	Stapleton (CP)		Apologies	Syd	Utting		Apologies - flying
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1.1 Chairman’s introductory remarks	<ul style="list-style-type: none">New committee, new technology, SKYPE – will make life much easier in the future. Also phone-in from Australia.GermanWings - Note of concerns about ‘two people’ flight deck concept. EASA have only said ‘risk assess’, not mandated two people.																																																																																								
1.2 DAA remarks – committee administration	<ul style="list-style-type: none">Hoped concept of Pulling, not Pushing, information was accepted, though needs emphasise as some were only aware of the meeting when the SKYPE email was sent.SKYPE – need to avoid using WiFi during meeting – otherwise, SKYPE available bandwidth drops too muchWith many topics to discuss at this session, it had been deciding not to include a cameo.																																																																																								
2. NOTES OF PREVIOUS MEETING																																																																																									
2.1 RSS Feed	<ul style="list-style-type: none">DAA noted that an RSS fee was not provided for the committee page and would investigate if this was possible. ACTION: DAA - COMPLETE																																																																																								

2.2 UK FSC Redacted Notes	<ul style="list-style-type: none"> • We had planned to include a copy of UK FSC redacted notes on the webpage but have held off doing so pending confirmation that this would be appropriate on a web page that any Air Pilots member could access. • Need an alternative means of dissemination/review website structure/permissions
2.3 Future Flight Deck research project	<ul style="list-style-type: none"> • Peter Cox would forward trials contact details/subject requirements to DAA for promulgation to the wider membership.
2.4 Representation on UK Civil Aviation Medicine Forum	<ul style="list-style-type: none"> • DAA had arranged for Air Pilots to be represented by Prof Mike Bagshaw who attended the 41st meeting. DAA will make these available through the committee website (post meeting papers) as soon as they are cleared for wider release. Action DAA - COMPLETE
3. TOPICS FOR DISCUSSION – Agenda taken out of order	
3.1 WG- Human Factors – Fatigue & FRMS	<p>Led by Nick Clutton</p> <ul style="list-style-type: none"> • Target: ICAO/IATA target audience, extending down to the pilot . • Fatigue risk management reporting • <u>Science</u>: Air Safety Group - Russ Williams, commenting on EASA proposals that replace CAP371 • Dr Ian Perry – Circadian rhythm disorder • Meeting with BALPA – want to establish a review body at PhD level and above. • House of Commons says more research is needed too. • David Hill has been looking separately at automation dependency – • B737 CRM manual says fatigue and automation are covered separately. • Chris McGee – checklists written by lawyers – so a trap for fatigued crews. • Need support in automation. Flt Ops inspectors off sick with fatigue. • Think legal view on operator's duty of care to those over-flown would assist with leverage. • GCA have asked for ultra-long range ops to provide guidance on diet & exercise for crews. • Crew training: CAAi at RAeS conference said think they can teach Just Culture in 30 min on an iPad. • Emma & Nick see scientific arguments that are not intelligible by working crews – a task for the WG. • Corporate culture & reporting – Emirates have lots of cabin crew reports, few from pilots. • There are several models of fatigue risk management –SAFE, Boeing. CASA introduced some rules but have delayed next stage of implementation. • NetJets have a sophisticated fatigue predictive/monitoring process – includes ARMS (by Dave Prior) processing and generates trigger points depending on actual, as opposed to planned, duty events. • Chair had asked WG to look at number of pilots on short term contracts to manage their own fatigue. • How does this relate to the GA pilot? – WG aims to provide guidance - all for the individual to interpret. Then, does issued guidance carry a liability – should bias towards commercial • Pre-duty activity has a major impact, but is difficult to control or to account for. • WG advice could be sent through EASA to their safety team – EGAST could do this?

	<ul style="list-style-type: none"> • Support needed: • From automation dependency, thoughts of fatigue, attention and vigilance. • Checklists: Are these designed for the fatigued crew – i.e. as simple as possible? – or for the manufacturer's/operator's liability – i.e. overly complicated?
3.2 WG- Human Factors – Flight Deck Automation & Pilot skill erosion	<p>Led by Nick Goodwyn</p> <ul style="list-style-type: none"> • Little to report. Trying to work with CityU and Cranfield. CAA's LOCAG • Nick hoped to introduce CAA activity on pilot training to trigger a wider debate – postponed to week after next. • Marion offered to pursue with CityU • This work is conflated with Low Cost aid. (PMN – We should try to run these separately as they are not linked in activity terms.) • AAIB ops inspector noted that low time cadets involved in heavy landing can tell you all the instrument parameters but not the visual attitude. • Problem reported as getting worse in ops • Even when there is the opportunity for a manual landing or visual approach, pilots don't take it because the aircraft is not set up for it. • 40% of people going onto BA Dreamliner conversion training – are on remedial flying. • Australia – No activity evident. Exec council tried to monitor processes but found that was not effective. • Marion – lack of stimulation; Tilman's CityU work on this was relevant. • International Fly Crew Training Conference in September. • ATOs talk up the quality of their product, but many major airlines said they had significant issues about the entry standard of new entrants – 40% failure rates. • Airlines and ATOs both reluctant to spend more, so each expects the other to fix it. • Similar views expressed in OZ • International gliding competitions have high percentage of airline pilots • Does that mean that some pilots are retaining their skills? • Are gliding skills relevant to CAT operations? • A320 – 15 days type conversion, 8 sims, 7 days lectures. • Pilots likely to forget the tech by the time they have a failure? • Engine cowl loss pilots had not flown non-AT for several years but the failure caused the system to deny them use of AT. • Poor experience compounds pilot difficulty in an emergency. • If Automation is safer than manual flying, is the metric by way the risk is measured correct? • Is there a benefit in the right balance of manual and automation? • A350 training now starts with manual flying and develops to automation. • Marion – Benjamin PhD proposal – looking at Startle – how long it lasts and how you overcome it. (Relates to large area of research at City U) Wants to see if Air Pilots can help. • Agreed TC/WG can give feedback and liaison. Marion will continue the liaison but looks for an additional CAT expert to assist • Current pilot mentor – Chris McGee - is passionate about automation failure startle issues but could not be an academic supervisor (requires PhD qualification). • DAA contact Chris McGee & Marion by email to introduce. • All to offer comment on his email proposal to Marion.
3.3 Laser Update	<ul style="list-style-type: none"> • UK Laser Working Group meeting tomorrow in Bristol. Current status • DfT will not support laser pointer ban without hard evidence.

	<ul style="list-style-type: none"> • Number of reported attacks/reported seriousness not yet compelling. • BALPA and Air Pilot evidence of under-reporting already exists. 2,000 attacks/year in UK. • NZ experience of making possession illegal and Spain's introduction of 1,000 Euro fine has reduced the rates of attack. • Other transport methods also being approached. • Lorry drivers do not have a consolidated reporting method. • Shipping can use CHIRP. • HEMS are particularly vulnerable. • Single pilot at particular risk. • Need to help DfT understand the potential cost of an accident following an attack – cf Vauxhall accident. • UK Laser Working Group will continue to press the issue with police to national authorities and government. • Further report next meeting.
3.3a WG-Admissibility of AAIB reports in court	<p>Led by DAA</p> <ul style="list-style-type: none"> • Discussions have been held between DAA, HH Tudor Owen and HH Harvey Crush. • There is a sharp difference between AAIB reports, which are public domain, and AAIB-collected data, release of which is prohibited without a court order. • There are very specific conditions laid down to guide court decision. • Civil case in England has not really changed the landscape, it is part of the activity of people making and defending aviation claims. • More important is the likelihood of data being made available in the criminal field. • Reports have not been permitted in criminal cases but the Scottish helicopter case, (Puma flying onto sea) led to police application to include the CCVR as evidence. (Both pilots and BALPA objected but BALPA subsequently withdrew.) • Police intend to use the CCVR to get CAA to evaluate it then hand back the recording to AAIB. • Coroners court – coroner has called for CVR to be played in open court. • Need informed and experienced opposition to ensure (e.g.) CVR not played in court but also need to present that in a way that does not seem to be pilots protecting pilots. • EU position has pre-amble about preserving safety data but makes point about balance between safety and public interest • Help needed – BALPA contact could be useful • JT + Dai + Harvey + Tudor to consolidate. Output should be a position paper. • Michael Cleaver will research what protections are available in Oz to the investigators, the investigation reports and the evidence.
3.4.WG – True North Heading Reference for CAT	<ul style="list-style-type: none"> • Transport Canada have passed a paper to ICAO (CANSO?) (Navigation Forum) for early presentation. • We should attempt to support their position. We can write a paper for Glasgow RIN conference and something to ICAO – Miles and Paul Hickey • DAA to contact Jeremy Tracy – to investigate our support to Transport Canada's move.
3.5 CAA Review of Air Display Regulations	<ul style="list-style-type: none"> • Safety Directive & Safety Notice refer SD-2015/003, SN-2015/003 • CAA Risk Review Panel covered remaining air displays & special events post Shoreham

	<ul style="list-style-type: none"> CAA Review of UK public air display arrangements will evaluate: the content of the air display; location and characteristics of the air display venue, including displays not over a recognised aerodrome, coastal locations, and the surrounding area/infrastructure; and the potential danger to members of the public. The Review will also consider what lessons can be learnt from other air display accidents both in the UK and other countries, as well as how other countries authorise air displays. Interim report due October, Final report planned Feb 16 now more likely March/April 16 Some consultation with air display 'community' DAA observed it is too disparate to be considered a homogenous 'industry' Working Group, Project Board & Independent Challenge Panel.
4. WORKING GROUPS (NOT COVERED ABOVE)	
4.1.1 UK Flight Instructors Working Group	<ul style="list-style-type: none"> Working on SKYbrary 'Inadvertent flight from VMC into IMC' article
4.1.2 Air Pilots' Good Neighbour Initiative	<ul style="list-style-type: none"> Marion will scope the issue DAA - Add name of WG leader to each WG.
4.1.3 Transport Environmental Budgets	<ul style="list-style-type: none"> Confirmed this is an area too complex for us to approach? PARKED
4.1.4 Pilot Contracts	<ul style="list-style-type: none"> No progress - needs a review of WG membership
4.1.5 Unmanned Air Vehicles	<ul style="list-style-type: none"> Awaiting Chris Norton input. Next Gen Predator/Reaper (Protector) training will be entirely UK-based. 2015 total drone-related airprox 30 (2 collisions) 7 CAT A airprox, 6 with drones. Airprox Board has new categorisation system for manned v drone. – inside wingtip, Cat A. Max alt encounter to date FL130. US started doing FOD tests on small drones – pretty horrific. NZ – all drones registered, website to explain rules & regulations, No point in having regulations if you cant enforce them. Noted that GA has not had input on possible drone regulation?
4.1.6 Addressing 'skill fade' – a Low Cost Training Aid	<ul style="list-style-type: none"> Covered above at 3.2
5. NOTICES/UPDATES FROM OTHER COMMITTEES, EVENTS, ETC.	
5.1 UK FSC	<ul style="list-style-type: none"> Redacted minutes will follow. CAA plan to merge UK FSC, GASCo and AirProx. New members – Emirates, Virgin re-joined, FSC is funded by members (£1200) plus matched payment from CAA for UK operators.
5.2 GAP	<ul style="list-style-type: none"> Little to report but: <ul style="list-style-type: none"> Medical standards for PPL/NPPL = DVLA standard. Theoretical knowledge questions for PPL slipped further, PPL/IR – seeking guidance on GPS approaches. EASA Mandatory Reporting regulation causing CAA problems because they lack the manpower to handle, so Annex 2 aircraft may be exempt.

	<ul style="list-style-type: none"> E-conditions covered by CAP1220.
5.3 Met Users Forum	<ul style="list-style-type: none"> After pilots complained about poor wind measurements the anemometers at Manchester were found to be mounted too low (6m) and subject to a correction factor. Now they have been replaced with 10m high anemometers and reported winds are much better. Met office will be investigating impact of composite structures on hold-over times. (Better late than never.) The R&D steering group funded by CAA has been wound up. CAA consultation on automatic wx stations. <ul style="list-style-type: none"> DAA copy link to members. Unfortunately, the consultation was not available - see: https://www.caa.co.uk/Our-Work/Consultations/Open-consultations/ and https://www.caa.co.uk/Our-work/Consultations/Closed-consultations/
5.4 NATMAC	<ul style="list-style-type: none"> No report
5.5 DfT	<ul style="list-style-type: none"> DAA attended meetings 6 Oct & 27 Nov. Unable to attend 6 Jan 16 meeting on Basic Regulation. ECAST/EGAST/EHEST might be binned – EASA too busy to do consultation with industry. CONOPS on FL180 TL is out for consultation but its focus is mainly on air traffic rather than flight deck.
6. Any Other Business	
6.1 Meeting critique	<ul style="list-style-type: none"> Agreed we should try to integrate WG and discussion topics as appropriate in future. Should consider a (multi) directional microphone for anyone phoning in Timing <ul style="list-style-type: none"> 1030-1100 UK start followed by late lunch would be better for Far East. 1400+ would be better for North America Should the discussion topics include Airspace, now that people want it for things other than aviation?
6.2 CAA 5 year strategic plan	<ul style="list-style-type: none"> Mentions PBR. Majors on costs to regulated rather than safety. Little note of caution about a programme of change from compliance based oversight to performance based oversight. DAA to circulate to members. See: https://www.caa.co.uk/Our-work/Corporate-reports/Strategic-Plan/Our-five-year-strategic-plan/
Next meeting(s)	
	<p>25 May 2016, Cobham House at 1330</p> <p><u>Subsequent dates:</u> 20 September 2015 Watch website for more info/any changes</p>
Conferences (for info)	<ul style="list-style-type: none"> 10-11 Feb 15 UK Air Display Pre-Season Symposium - Shrivenham