



SDI FINAL EVALUATION FORM 1.1

PART 1:

Journal Name:	British Journal of Applied Science & Technology
Manuscript Number:	Ms_BJAST_19896
Title of the Manuscript:	Cloud Based Architecture Solution for Aircraft Flight Data Recorder
Type of the Article	Original research article

PART 2:

FINAL EVALUATOR'S comments on revised paper (if any)	Authors' response to final evaluator's comments
Author(s) state: 'The concept of NextGen, is employed where ADS-B equipped aircraft sends their identification along with speed and precise vertical and horizontal positions to the Global Navigation Satellite System (GNSS) constellation [30].' This is incorrect – ADS-B information is sent to air traffic services for precise tracking of aircraft. This entire paragraph makes no sense. Author(s) state that data will be sent 'via' satellite communications. Which satellite(s)? Low data rate for the Iridium constellation, so this seems unlikely. Geostationary relay would mean require high power transmitters for the amount of data to be sent. Either way, it is an expensive proposition for the airlines. Much more information needed about this process. If an aircraft is ADS-B equipped then it could be tracked to the point of impact with the ground/ocean and the flight recorder could be recovered. With the advent of space-based ADS-B in the next several years, I do not see the need for backing up the FDR on the cloud. I do not understand the algorithms given in the aircraft transmission or security sections of the paper. From a technology standpoint it is critical to know the amount of encrypted data to be transferred per second from the FDR and whether any communication system already resident on an aircraft could handle it. If not, what systems would have to be implemented on the aircraft? Airlines are unlikely to pay for expensive alterations on the aircraft to back up the FDR. Even ADS-B is based on existing systems on the aircraft. The idea of tampering with FDR data is speculative and not appropriate for inclusion in a scientific publication. This seems to be a major reason put forth by the author(s) for backing up the FDR on the cloud.	ADS-B equipped aircraft broadcasts its position continuously to multiple aircraft or multiple ATM Units Aircraft equipped with ADS-B are able to detect all other similar equipped aircraft or vehicle in surrounding airspace. ADS-B is seen as a tool that will revolutionize aviation by enabling Air-to-Air surveillance. Integration of this with others like GPS, TCAS makes both communication possible. SATCOM data link are already being used by airlines. Satellite-based communication system supplied by Geo-stationary Immarsat system offers near global coverage and excellent voice and data communications. These are now reflected in the paper