interdiction The developers of modern avionics for aircraft focus on safety and management issues , make them safer, and more effective.Retrieved from http://www.aia-aerospace.org/wpcontent/uploads/2016/12/AIA_StateOfIndusrtyReport_2016_V8.pdf You do not have an in-text citation for this entry.According to the "Heavily reliant on global satellite positioning of aircraft in flight and on the ground, NextGen combines GPS technology with automatic dependent surveillance-broadcast technology (ADS-B) for traffic separation" (Soundar, 2013). NextGen is a future perspective for avionics development by 2025. Advantages of the modern communication and navigation systems A voice communication is a priority in comparison with the dedicated radio channels in the modern aircraft management. One cannot deny that the modern aircraft needs a combination of digital and analog communications. Radio communications are the priority in the modern aircraft. These technologies are implemented in the modern aircraft. Radios are also embedded in pilots and ground controllers (for example, pilot-to-ground and pilot-to-pilot radios). The aircraft controllers send the required information to the pilots via the radio signals. The flight crew has also access to radio signals. Another key concern for the modern developers of avionics is a transponder. This device is used for machine-to-machine communications. Such data as altitude to ground, range position information and other related data are under consideration in the modern researches and studies. The key advantage of the transponders is as follows, "All modern transponders in controlled airspace use either Mode C or Mode S transponders that report pressure altitude--this removes the human-to-human, pilot-to-controller communication burden to constantly report current altitude to air traffic controllers" (Soundar, 2013) In the nearest future, the U.S. Army special operations helicopters will be equipped with the modern avionics focused on the enhancement of the aircraft capabilities.Retrieved from https://books.google.ae/books?id=Gp55CgAAQBAJ&lpg=PA217&ots=5x3U-_Os7C&vq=%E2%80%A2%20Barreveld%2C%20D.%20(2015).%20Aircraft%20Crash%20Investigations.%20Lulu%20Press.&dq=%E2%80%A2%20Barreveld%2C%20D.%20(2015).%20Aircraft%20Crash%20Investigations.%20Lulu%20Press.&hl=ar&pg=PA217#v=snippet&q=%E2%80%A2%20Barreveld%2C%20D.%20(2015).%20Aircraft%20Crash%20Investigations.%20Lulu%20Press.&f=false Colucci, F. (2003, February).Further, the key focus is on current changes in the area of avionics, such as the NextGeneration program, technologies of voice/radio communication, the Global Positioning System (GPS), The Federal Aviation Administration (FAA) Wide Area Augmentation System (WAAS), Automatic dependent surveillance-broadcast (ADS-B), fully integrated software-configurable single radio system and others.Another step forward is the development of innovative airworthiness systems with built-in remote concentrators, the development of a multifunctional, fully integrated software-configurable single radio system (IMA / SDR / CNS), and implementing effective built-in controls to improve the level of errors control and maintenance of the aircraft.The creation of new network architectures using effective interfaces (Ethernet, Fiber Channel, Wi-Fi, SpaceWire), development of functions, sensors, and elements ensuring the efficient design of dynamic structures.4G LTE Bandwidth for airlines is gaining its popularity and many telecoms and avionics vendors intend to deliver high-speed fourth generation (4G) Long Term Evolution (LTE) Wi-Fi networks for airline passengers globally."ACARS interfaces with interactive display units in the cockpit, which flight crews can use to send and receive technical messages and reports to or from ground

stations, such as a request for weather information, clearances, or the status of connecting flights" (Barreveld, 2015, you must have a page or a paragraph number for ).Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.138.7423&rep=rep1&type=pdf Raza, A., Ulansky, V. (2015).These capabilities are constantly improving the existing systems and technologies with newer communications platforms thus facilitating the operations of global airlines.Recommendations The modern air traffic controlling system depends on a wide range of communication technologies to ensure safe, accurate, timely, and efficient operations of our global commercial aerospace systems."The technology is called common avionics architecture system–or CAAS–and will be installed on special operations MH–47G Chinooks, MH–60M Black Hawks, and MH/AH–6M Little Birds cockpits" (Colucci, 2003).The creation of joint principles should focus on the systemic modules unification, development of protocols for the systemic components interaction and perform the functions of the system on a single computing basis.First, this system is able to improve the processing of numerous characteristics, check and correct faults and errors, reduce the number of antennas if the software is improved.In addition, a ground–based Wi–Fi network for airlines can also improve communications between airline flight crews and ground staff through the transmission of real–time aircraft data and related analyses.http://publications.drdo.gov.in/ojs/index.php/dsj/article/view/4269/4461 Soshkin, M. (2016).(1996, October 13).