Research article

Drones and media industry

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Abstract. Today's world is a techno savvy world. Technology is boon for the mankind. As technology is growing so fast, everyone is using it to enhance the work and same time to reduce the efforts. It is used to help information flow, data transfer, to access, organize and process the data and by many ways. Media industry is also not an exception. Technology plays various roles in media industry like print, broadcast, internet information technology and electronic media. Media industry emerged the new technology with old one to improve performance to make a best out of it. Many technologies used by media industry to capture the news or events, for taking footages and pictures of a breaking news. Recently drone is used widely for reporting and capturing news by the media. There are many synonyms used for drone, for example, unmanned aerial vehicles. This study aims to understand the role of drone in the media industry. It also describes the use of drone in media. This paper describes how the use of drone makes the work easy for the reporters. As every technology comes with some pros and cons so it also discusses benefits and challenges of this technology while using it.

Keywords: information technology, drone aircraft, drones, robotics, the media industry, the media, journalism

Introduction

Every industry in the world is using technology to make their work better and faster. Robotics is a stream of technology which creates many inventions to make the work easy. Drone is a significant creation of robotic technology. It comes in various shape, size, speed and form. "A powered, aerial vehicle that does not carry a human operator, uses aerodynamic forces to provide vehicle lift, can fly autonomously or be piloted remotely, can be expendable or recoverable, and can carry a lethal or non-lethal payload. Ballistic or semi-ballistic vehicles, cruise missiles and artillery projectiles are not considered unmanned aerial vehicles" [1]. Robotics is used in many industries like automobile industry, food industry, logistic industry, etc. Drone is a prodigious invention of technology which increases performance of many sectors. It is called by different names like unmanned aircrafts (UA), unmanned aircraft systems (UAS), remotely piloted aircrafts (RPAs), remotely piloted vehicles (RPVs), unmanned aerial systems (another UAS), unmanned aerial vehicles (UAVs), uninhabited aircraft, drone aircraft, and drones. Drone is invented for taking images and videos,

logistic and transport, etc. Initially drone was developed to serve military, to collect information about opponent defense force and to perform many operations against terrorist and opponent armies. Even it is used by the government to do patrolling on the border to maintain law and order and to gather sensitive information. In India "state authorities also deployed networked drones at the Kumbh Mela in 2014. Similarly, Airpix partnered with Mumbai police this year to provide the latter data and feeds last year's Ganesh Chaturthi processions" [1]. It is a mini aircraft controlled by the onboard computers or remote controlled by a human pilot. It is initially used in military but nowadays it is also used commercially. Commercially it is used for security, agriculture, inspection, land survey, delivery and many more. With the help of drone we are able to do more accurate work in less time. It is increasing output, work effectiveness, decreasing production cost and load, improving accurateness.

Types of drones [2] as per Directorate General of Civil Aviation, India (DGCA): Nano (weigh up to 250 grams), Micro (250 g to 2 kg), Mini (2 kg to 25 kg), Small (25 kg to 150 kg), Large (weigh more than 150 kg). There are advantages of drones with some disadvantages which are listed below.

Advantages of Drone

• As drone is in light in weight and operated remotely, it can reach at unreachable areas quickly.

• Drones are very cheaper compared to helicopters. Operational costs are expressively lesser compared to manned aircrafts. Renting helicopters are more expensive affair compared to drone.

• Drone is very safe in the difficult situations like flood, earthquake, fire, etc. It is a very safer option in such situations. Without direct presence of a person in affected geographical area it will give the footage of the situation of disaster and able analyze it from remote place.

Challenges of Drone

• As drone can fly directly anywhere even in the property of other people, it may cause the privacy violation by the user. As many laws are there regarding drone so violation of these regulation may cause the legal matters.

• Different nations are studying and doing research on how to normalize air safety ethically and legally. Not only for the violation of commercial airspace but also for public safety.

• There is a need of a trained operator for the great quality, so there is a need to provide training to the drone user.

• People perception about drone is negative as they think it violate their privacy. It has a negative impact on people.

• There is an operational risk and hazards as drone can crash into building or people. This may cause injuries or damages. High risk involves in using of drones. It may fall from a great height due to battery discharge, injury triggered by weather conditions, striking in a hindrance (tree, building, high-voltage line). These risks are predictable so it is possible to avoid these situations.

Reporters carry a tool kit to capture news, it content many devices, which is necessary to yield news. One more sophisticated and high-tech device is added into this list and that is drone. Nowadays drone is a very popular topic in media [3–11].

These tiny aircrafts is allowing reporter to capture news like never before. These aircrafts are very small in size, affordable and even user friendly. Drones have great prospective in journalism, extending from disaster coverage to protests, traffic reports, and even for sport events. "Operational, technological and economic issues outline the practical dimensions of Drone Journalism that are considered very important for all professional media organization, freelancers drone hobbyist and citizen journalists" [12]. As it is user friendly and easy to operate it is now very much in demand for the reporters. Funaster and Quidich are two Indian startups that now extensively provide different kinds of media services based on drones and UAVs. Quidich also had a tie-up with Indian media house Headlines Today to cover election rallies and events in various cities like Varanasi, Muzaffarnagar, Vadnagar and Amethi [1].

Reporter used drone for data gathering, reporting and broadcasting. Especially drone is very useful to capture and share the breaking news. "Waite said he expects local and national broadcast television to emerge as the early leader in Drone Journalism, but eventually daily newspapers and data journalists will be able to get the most effective use from drones" [13].

Drone is a more and more prevalent tool in media across the world. In media industry, journalist use drone to capture the event like natural disaster, manufactured disaster and many more. Previously if reporter wants to take the aerial view then they have to capture the event with the help of helicopter, which is now very easy with drone. Use of helicopter is very expensive and time consuming. With the he help of drone taking an aerial view is cheaper and not even risk in case of risky situations. The role of media is very important in common people. So the authenticity and the fast coverage of the news are very important with respect to breaking news.

There are some drawbacks of drones which are listed above have effect on the reporters coverage and the activities which they captured with the help of drone. As we know that these small aircrafts are lighter in weight so they are able fly very easily but some time we have to installed and embedded with some instruments if needed like camera, mike, Global Positioning System (GPS), computer systems, spa rays, etc. "As weight increases, the safety precautions become more important for all the operating users, the public and the drone equipment itself. Therefore, dedicated know-how is needed for controlling UAVs in real newsgathering situations, for carefully scheduling proper operation and maintenance of all the involved systems before, during and after the flight. This technical, procedural and operational expertise is necessary to the new journalists that will play the roles of drone commanders (PIC) and observers" [12].

These aircrafts can damage or caused injury if it is not handled properly. As these is predictable and avoidable situation, still remote pilot has to take care of that this should not happen. As per research scholar Ángeles Fernández Barrero "it is ideal for obtaining panoramic views and tracking, thus providing viewers with striking visual information (demonstration, protests, etc.). These images can be captured from different perspectives, angles, and altitudes by using more than one drone, which could also be useful for sports broadcasting. However, filming inhabited areas has been restricted by law until only very recently, and television stations and operators are still cautious about public safety issues" [14].

As we already elucidated, two main drone advantages, exclusively when equated to helicopters in borough newsgathering circumstances, is convenience and cheaper. This is very imperative seeing that this technology is still growing and, in no case, it can be painstaking at the same mellowness with the helicopters. Among the concerns that have not been correctly established yet it can be deliberated the ethical implications that are related to journalism ethics concern with privacy and security, same time with their place into an integrated governing outline. While a worldwide-adopted regulatory framework is missing, there is detected a methodical effort for many states or countries to settle legal matters related to Drone Journalism. "The use of drones, officially recognized by the Federal Aviation Administration (FAA) as Unmanned Aircraft Systems (UASs), to capture video has become popular among hobbyists – but FAA regulations currently prohibit the commercial use of drones, with few exceptions. Congress mandated a 2015 deadline for the FAA to announce regulations, which would integrate commercial drones into the National Airspace System (NAS.) The FAA released a proposal in January of 2015, and solicited public suggestions for changes. The deadline for comment was April 24, 2015. Now, the FAA has begun a review process, to determine a final set of regulations. This review process could take several years" [15].

Research methodology

As media used many technologies to enrich the work, drone technology is one of that. This paper discuss about role of drone in media journalism. At the time of any disaster (it can be natural or man-made) situation or any event broadcasting drone is used to capture the video footage or to click images of the event. Secondary data is used and studied here to do illustration of conclusion for this topic.

- *Research Design* is a detailed plan of action for the research. It contributes the blue print for collection, measurement, tabulation and analysis of the data. Historical research turns history or the past to study the patterns, their impact on the present, process and so on. In this sense, this research can be termed as a historical research.
- *Research Instrument* – this research is based on the secondary data. In addition, the secondary data has been collected from different types of sources as literature reviews, research papers, books, articles, journals and websites.
- *Research Area* – this study is on media using drone technology for covering news and taking photos/images.

Data collection

For this paper data is collected from various newspaper article, magazines, research papers, journals, websites, books, etc. Most of the literature is there on the rules and regulation with privacy polices of drones. As law with respect to drones is not clear, many authors studied about FAA rules and regulation. FAA is still working on the law for using drones with other government bodies. As these aircrafts are boon for the media industry, some researchers studied the use of it in their own constitution. Data propose that the literature miscarries to study various applications of drones and it utilization, it also fail to recognize the application or operational problem faced by the user while taking report.

Analysis

This study proposes to discover the impact of the role of drone in media industry. This encompasses comprehensive analysis of how the media used drone to accelerate news capturing and broadcasting. In fact, how drone is used to get content of news in media and controls the reach of the breaking news with the help of drone. In this research the data is composed via the secondary source. The data is poised and studied by literature review for understandable form. This study will take a research scholar one step ahead w.r.t. this topic.

Conclusion

Because of its size it can functions in insignificant time. High value of documentary content is provided by a drone which has a great impact on the news credibility specifically in the case of breaking news. Drone is very helpful tool for reporters to obtain video footage and photos of the disasters like natural disasters – earthquake, hurricanes or floods, etc. or man-made disasters – dumping or forest fires, etc. where it is difficult for them to reach without putting their and their team's lives at risk. While using drones reporter's life is not on stake and they can take footage very safely from the remote place. Hiring a helicopter is more time consuming and costly affair. Taking footage from a helicopter is also risky. Reporter need to be present on the site.

As these drones have advantages it also has some disadvantages/challenges. While using it as reporting tool in their tool kit reporter has to aware about these drawbacks. Especially reporters need to study the privacy and legal things regarding theses drones.

Performance of the drone is depends on many parameters like weather conditions, remote operation rage, Wi-Fi status and reliance and many unexpected situations. Damage may occur because of loose of control, bad weather conditions and many more, but these are predictable situations so it can be avoid by the user. Safety and privacy are most important concern of these aircrafts. FAA and other government bodies are trying to build a law and regulation regarding these aircrafts. Despite of all these issues it now one of the favourite tool of reporters. "The Indian government has also specified certain areas that will remain out of reach for drones. Drones are not permitted to be flown within 5 km radius of an operational airport, 50 km radius of international border including Line of Control (LOC) and 5 km radius around New Delhi's Vijay Chowk, as a few examples. Also flying over densely populated areas affecting public safety, over eco-sensitive areas like national parks and wildlife sanctuaries is also punishable. Under such strict laws the use of drones for scientific tasks is not barrier free and requires several permissions" [2].

Limitations

As this study is not based on a primary data, so to understand the actual use of drone in media and problem faced by the reporters while using it practically is quite tough. As every nation have a different laws regarding drone other than FAA it is again difficult to study real time situation of reporters while facing it without primary data. This report could be used as a first step concerning constructing a theoretical structure. As new versions of drone are coming in market continuously so the data regarding drones are not easily available.

Topics for further research

Survey can be done regarding safety, conflict and privacy of the drone and its applications use by the reporters who use these drones for reporting or for capturing video footage and photos. Knowing the all above limitations, media/reporter must keep positive view that the FAA will arise to agreement on rules and regulations to use of drones by reporters available. It also can studied that keeping these drones with reporters tool kit is safe or not and even the privacy issues of the drone can be study in detail which is a totally different topic.

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Дроны и медиаиндустрия

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Аннотация. Сегодняшний мир – это мир стремительно развивающихся технологий. Они используются для обработки информации, передачи данных и оптимизации доступа к ним. Технологии играют важнейшую роль в медиаиндустрии, кардинально трансформируя прессу, вещание и электронные средства массовой информации. Инновационные решения применяются в журналистике для сбора фактов, наблюдения за событиями, получения уникального видеоматериала. Данное исследование посвящено роли дронов (беспилотных летательных аппаратов) в медиаиндустрии. Описывается использование дронов в СМИ для облегчения работы репортеров. Поскольку любая технология имеет свои плюсы и минусы, в статье обсуждаются преимущества и проблемы беспилотных летательных аппаратов.

Ключевые слова: информационные технологии, беспилотные летательные аппараты, дроны, робототехника, медиаиндустрия, средства массовой информации, журналистика

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