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Quadrupedal robots and geo-located video: Implications of drones for the broadcasting media and film industry

Quadrupedal robots equipped with geo-located high-definition video cameras are emerging as important new tools for broadcasting media and film-makers. Quadrupedal robots are multicopters that lift and propel via four rotors. Quadrupedal robots are an increasingly common, inexpensive and relatively safe form of unmanned aerial vehicle (UAV). Quadrupedal robots can be equipped with various sensors, including high-definition video cameras with geo-location tracking. The government classifies quadrupedal robots as rotorcraft rather than fixed-wing aircraft. Regulatory frameworks for quadrupedal robots are still in an unsettled state in the U.S. and internationally. Several companies making quadrupedal robots bring various approaches to the technology. One company, Paris-based Parrot SA, has developed a wifi-controlled quadrupedal robot (selling for about \$299) piloted remotely via Smartphone or tablet. This paper examines the implications of quadrupedal robots, also called quadcopters and popularly known as drones, for the broadcasting media and film industry. Four areas of impact of video-equipped quadrupedal robots are particularly considered, including 1) new methods of video production, 2) how storytelling may be transformed, 3) implications for audiences, and 4) economic and regulatory implications. Video-camera-equipped quadrupedal robots offer broadcasting media and film industry important capabilities for producing aerial video at a much lower cost than traditional methods utilizing helicopters. Moreover, because of their relative safety, small size (about one meter in diameter, made of mostly plastic) and ease of use, quadrupedal robots can be used to shoot video in-doors or in other tight spaces. Documentary makers, for instance, have already started using drones in production of documentaries. Oscar-nominated documentary-maker, Bayley Silcock, used a quadrupedal robot to film under low bridges over the Rappahannock River in the Chesapeake Bay watershed. Geo-located video shot via quadrupedal robot also presents new possibilities for storytelling. The term "drone" also conjures negative imagery to the public, including their use in military strikes and spying (threatening privacy), and this paper examines these wider considerations.

Biography

John V Pavlik is professor in the Department of Journalism and Media Studies at the School of Communication and Information at Rutgers University. While on leave from Rutgers in 2013; he served as the inaugural Associate Dean for Research at Northwestern University in Qatar. He is member of the Advisory Board of the Global Communication Research Institute at Shanghai Jiao Tong University, China. He has written widely on the impact of new technology on journalism, media and society. His books include *Converging Media*, *Media in the Digital Age*, *Journalism and New Media* and *The People's Right to Know*. He recently completed a two-year project funded by UNESCO on curriculum reform in journalism and mass communication in Iraqi higher education. He was the Inaugural Fulbright Distinguished Chair in Media Studies at the Academy of Fine Arts, Vienna, Austria (2008). He was the Inaugural Shaw Foundation Visiting Professor of Media Technology at the School of Communication Studies, Nanyang Technological University, Singapore (2000). From 1995-2002, he was professor and executive director of the Center for New Media in the Columbia University Graduate School of Journalism. From 1988-1994, he was Associate Director for Research and Technology Studies at the Freedom Forum Media Studies Center at Columbia University. He is co-developer of the Situated Documentary, a form of location-based storytelling using the emerging mobile and wearable technology known as Augmented Reality. His PhD (1983) and MA (1979) in mass communication are from the University of Minnesota. His undergraduate degree in journalism and public relations was from the University of Wisconsin-Madison (1978).

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