

INTERPLAN

APA

American Planning Association
International Division

Fall
2014

Notes from the Chair	1
Division Business	2
Planner Profile: Brian Kellogg	2
Special Update from APA	3
Facts & View Points	4
Project Gallery: Maha Sarakham, Thailand	6
Program Spotlight: APA	
Conference Discussion	9
Book review: Planet of Slums by Mike Davis	10
Community News	11
Window to the World	12

DIVISION LEADERSHIP

Timothy D. Van Epp, AICP
Division Chair

Laura Buhl, AICP
Past Chair

Vacant
Secretary/Treasurer

Victoria Okoye
Vice Chair of Communications

Richard B. Stephens
Vice Chair of Special Projects

Michael Kolber
Vice Chair At Large

Brian Kellogg
Social Media Coordinator

Miroo Desai, AICP
International Exchange Program

Luis Cabrera
Website Coordinator

NEWSLETTER COMMITTEE
Ana M. Hernandez-Balzac
Editor In Chief

Cristina Delgado
Design Editor

Notes from the Chair

by **Tim Van Epp** in New York

As of three months into my position, there have been many exciting developments in the International Division. After holding elections and the annual business meeting, a new slate of Division leaders has taken office. ([For a list of the new officers, please click here.](#)) The new Executive Committee is a very talented and dedicated group, and as the new Chair I look forward very much to working with them.

I also want to express my sincere thanks to the outgoing Executive Committee for a job well done over the past two years and especially for the support they have provided during the transition. We are especially fortunate to have Laura Buhl's continued participation in the Executive Committee in her new role as Past Chair, and to have Michael Kolber, who served as Vice Chair of Communications, as the new Vice Chair at Large. I am also pleased to see that we have several volunteers who will continue helping with the many tools the Division uses to reach out to its members: Ana Hernandez-Balzac and Cristina Delgado with this publication, Brian Kellogg with social media, and Miroo Desai with the International Exchange Program.

Going forward, we will need to enlist even more volunteers! These are some of the initiatives we will work on over the coming two years:

- Deepen and broaden our contact with planning students. If you want to be your school's student representative to the Division, please contact Michael Kolber at makolber@gmail.com.
- Continue to play a key role in organizing the World Town Planning Day (WTPD). WTPD involves collaborating with national planning organizations from around the world to put on a full day of webinars on international planning topics in November of each year. This year, we need two volunteers to assist with management of conference finances and technology. Please contact Laura Buhl at buhll@yahoo.com to join the WTPD committee.
- Organize the Division's activities during the 2015 National Planning Conference in Seattle, WA. We need volunteers to coordinate our facilitated discussion, by right technical session, and mobile workshop. Additional volunteers will be appreciated for mentoring young professionals and supporting Divisions Council activities. To volunteer, please contact me at tvanepp@gmail.com and copy Ric Stevens, Vice Chair for Special Projects, at ricstephens@frontier.com .

For other opportunities to volunteer with the International Division, please see the Division News on page 2 and follow the link to sign up. To suggest other initiatives, do not hesitate to contact me or Ric via email!

Cordially,

Tim Van Epp, Chair

Tim Van Epp is an Environmental Planner, Founder and Managing Director of Eurasia Environmental Associates LLC. He was elected Chair of the American Planning Association International Division last Spring.

Current and Future Uses of Drones Across the Globe by Ric Stephens and Stephen Burt



Ric Stephen's Green Cities class at the University of Oregon where a student (lower right) flies a drone (top center).

Source: Ric Stephens.

Unmanned aerial systems (UAS), or “drones,” are on the leading edge of technology combining aviation, robotics, GPS, remote sensing, photography, and videography. On a daily basis, new applications for drones emerge, and this dynamic industry is today valued in the billions of dollars: “...the market for commercial and non-military drones will top \$13.5 billion within three years, and will grow to more than \$80 billion between 2015 and 2025, during which more than 100,000 well-paying jobs will be created. They predict national tax revenue of \$482 million by 2025” (Wilbanks 2013).

The U.S. Federal Aviation Administration is currently developing rules and regulations for drones, and until they are completed in 2015, commercial uses are not allowed. According to Stephens (2013), planning and design uses include:

- site analysis;
- view and viewshed analysis;
- agriculture and open space assessment (including infrared);
- evaluation post-disaster sites;
- monitoring construction and buildings;
- recording public events;
- studying inaccessible, sensitive, or dangerous environments;
- studying operating transportation systems;
- large-scale development of video; and
- other uses yet to be defined.

Across the world, many countries are moving forward with developing this “transformative” technology and its applications. The following examples provide an international perspective on drones.

Disaster Planning

United Kingdom

Flooding in the United Kingdom makes transportation difficult, if not impossible, and impedes emergency response and relief planning. “Drone journalism” enables news reporting and public information. “Drones, helicams, hexacopters, octocopters, or unmanned aerial vehicles (UAVs) as they are sometimes known, are small remotely-controlled devices with a camera attached. Having been in use by hobbyists and photographers alike to capture stunning aerial images for several years now, major media outlets have started to put serious efforts into exploring their use for reporting and verifying news” (Haddou, 2014).

Haiti, Dominican Republic, and Lesotho

For remote areas lacking all-weather roads, drones are an ideal way to deliver critical medical supplies. A startup firm named Matternet is developing an approach to networking drones to transport emergency supplies to inaccessible areas. “Matternet has carried out test runs in Haiti and the Dominican Republic. Lesotho, in the middle of an AIDS epidemic, has been identified by the company as somewhere the system could usefully transport laboratory samples around the countryside. A pilot is planned there for later this year” (Hickey, 2014).

Government Services

United Arab Emirates (UAE)

The UAE has launched a program to use drones to deliver government documents. The design competition had a \$1,000,000 prize and is now in the pilot phase. Drone deliveries of government documents up to 3½ pounds are expected later this year.

Agriculture, Forestry, and Mining

Switzerland

The Swiss firm senseFly is a Swiss firm that designs and builds drones for clients in more than 45 countries. “With their in-built high resolution cameras, our drones can for example measure the amount of minerals dug up from a mine or gauge the damage done to a crop by a pesticide,” says Jean-Christophe Zufferey, the founder and owner of senseFly. In nearby Eclépens, Holcim - a world leader in cement production - has started using the drone technology to provide the authorities with information about the amount of gravel extracted from the local quarry” (Jaberg, 2013).

Peru

“In agriculture drones allow us to observe a larger cultivation area and estimate the health of the plants and the growth of the crops. The cameras aboard the drones provide us with 500 pieces of high-technology data, while with the human eye one can barely collect ten... Precise, high-quality images allow experts to measure the amount of sunlight the plants are getting, and study plant problems like stress from heat, drought or lack of nutrients” (Cisneros, 2013).

Environmental Monitoring

China

China's shift to environmental protection includes using drones to detect and monitor polluting industries. Drones are currently used in Beijing, Shanxi, and Hebei provinces, where industrial pollution is intense. "The unmanned aircraft can cover 70 square kilometers during a two hour flight. According to the state-run China Daily newspaper the drones have helped the ministry 'resolve' over 200 environment-linked cases, and the ministry is considering more drone inspections in other areas" (Duggan, 2014). The program cost is \$1,300,000.

Australia

In Australia, drones have "been used to monitor beaches, record plant breeding experiments, research how bushfires spread, and in one novel research project, to help monitor fruit bats in flight" (Evershed, 2014).

Wildlife Protection

Germany

Each year thousands of young deer are accidentally killed by agricultural machinery. The Bavarian government has initiated a program to use drones to locate deer then tag them with sensors to alert farmers of their location when mowing their meadow habitats. The program cost is \$3,500,000 (AFP Berlin, 2014).

Kenya

Throughout Kenya, elephants and other large game are vulnerable to poachers. All 52 Kenyan national parks will begin using drones after a successful pilot study that reduced poaching by 96%. The drones are able to track animals in remote regions while simultaneously spotting poachers. In addition to the technological advantage over traditional anti-poaching methods, the drones have a psychological impact on poachers. The program cost is \$103,000,000 (Gtonga Njeru, 2014).

Information and Communications Technology

Global Companies

Both Google and Facebook are developing high-altitude drone projects to provide high-speed Internet access in remote areas that do not have fiber optic or telephone infrastructure. Facebook's program cost is estimated at \$20,000,000.

What is the Future of Drones?

The governments of China and Japan are racing to become world leaders in artificial intelligence combined with robotics. The vast majority of drones are manufactured in China, and with government guidance and economies of scale, we can expect further Chinese drone market penetration, development, and creation. Other countries are combining multiple advancements in technology such as 3D printers and drones. The Australian firm Cyber Technology manufactures drones with components made by 3D printers (Unmanned, 2011).

U.S. legislation and public opinion that would inhibit or prohibit drones would place the U.S. further behind in the evolution of this transformative technology. In a society that is becoming increasingly concerned over potential threats from drones, the planners should be strong supporters of drone projects that have enormous economic, environmental, and social value.

Ric Stephens is an adjunct instructor for the University of Oregon and Marylhurst University; an international planning consultant, and U.S. Delegate to the International Society of City and Regional Planners. Ric is using drones for aerial photography and videography for planning projects in Oregon, China, the United Arab Emirates, and later this year in Switzerland.

Stephen Burt is the Co-Founder and CEO of Aerial Technology International LLC. Stephen has thousands of hours of experience conducting and managing UAS operations. Through his work at ATI, Stephen has been very successful in promoting the positive application of UAS technology.

References

- Agence France-Presse, Berlin. (2014, April 24). Germany deploys drones to protect young deer from combine harvesters. Retrieved from <http://www.theguardian.com/world/2014/apr/25/german-drones-protect-young-deer-combine-harvesters>
- Cisneros, L. J. (2013, August 15). Peru's drones used for agriculture and archeology. Agence France Presse. Retrieved from http://www.huffingtonpost.com/2013/08/15/peru-drones_n_3759298.html
- Duggan, J. (2014, March 19). China deploys drones to spy on polluting industry. *The Guardian*. Retrieved from <http://www.theguardian.com/environment/2014/mar/19/china-drones-pollution-smog-beijing>
- Evershed, N. (2014, March 4). Drones in Australia: fruit bats, forest fires and invasions of privacy. *The Guardian*. Retrieved from <http://www.theguardian.com/world/2014/mar/05/drones-in-australia-fruit-bats-forest-fires-and-invasions-of-privacy>
- Gtonga Njeru, Nairobi. (2014, April 25). Kenya to deploy drones in all national parks in a bid to tackle poaching. Retrieved from <http://www.theguardian.com/environment/2014/apr/25/kenya-drones-national-parks-poaching>
- Haddou, L. (2014, February 12). Journalism gets into the act as drones capture floods, protests and wars. *The Guardian*. Retrieved from <http://www.theguardian.com/media/media-blog/2014/feb/12/journalism-drone-capture-floods-protests-wars>
- Hickey, S. (2014, March 30). Humanitarian drone to deliver medical supplies in roadless areas. *The Guardian*. Retrieved from <http://www.theguardian.com/world/2014/mar/30/humanitarian-drones-medical-supplies-no-roads-technology>
- Jaberg, S. (2013, May 20). Successful takeoff for Swiss commercial drones. *Swissinfo.ch*. Retrieved from http://www.swissinfo.ch/eng/science_technology/Successful_takeoff_for_Swiss_commercial_drones.html?cid=35863208
- Kannan, P. (2014, February 10). UAE develops deliver drones to improve government services. *The National*. Retrieved from <http://www.thenational.ae/uae/government/uae-develops-delivery-drones-to-improve-government-services>
- Stephens, R. (2013, October). *The Age of Drones*. Planning. American Planning Association.
- Unmanned. (2011, October 25). Australian Cyber Technology Made 3D Printed UAV. Retrieved from <http://www.unmanned.co.uk/unmanned-vehicles-news/unmanned-aerial-vehicles-uav-news/australian-cyber-technology-made-3d-printed-uav/>
- Wilbanks, C. (2013, May 16). Drones a big industry waiting to be born. *Moneywatch*. Retrieved from <http://www.cbsnews.com/news/drones-a-big-industry-waiting-to-be-born/>