TechBeat is the monthly newsmagazine of the National Law Enforcement and Corrections Technology Center System. Our goal is to keep you up to date on technologies for the public safety community and research efforts in government and private industry.

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The NLECTC System

The Justice Technology Information Center (JTIC), a component of the National Institute of Justice’s National Law Enforcement and Corrections Technology Center (NLECTC) System, serves as an information resource for technology and equipment related to law enforcement, corrections and courts and as a primary point of contact for administration of a voluntary equipment standards and testing program for public safety equipment.

JTIC is part of the realignment of the NLECTC System, which includes the Justice Innovation Center for Small, Rural, Tribal, and Border Criminal Justice Agencies, which focuses on the unique law enforcement challenges faced by those types of agencies; the National Criminal Justice Technology Research, Test and Evaluation Center, which provides technology-related research and testing and operational evaluations of technologies; and the Forensic Technology Center of Excellence, which supports technology research, development, testing and evaluation efforts in forensic science. In addition, a Priority Criminal Justice Needs Initiative exists to assess and prioritize technology needs across the criminal justice community.

For information, visit www.justnet.org or contact (800) 248-2742.

NCJRS is a federally funded resource offering justice and substance abuse information to support research, policy and program development worldwide.

For information, visit www.ncjrs.gov.

ANDROID AND IPHONE APPS AVAILABLE

Android and iPhone apps are now available to access TechBeat. Keep current with research and development efforts for public safety technology and enjoy interactive features including video, audio and embedded images.
A child lost in a remote mountain canyon. A fire that threatens to engulf several city blocks. The Super Bowl. What do they all have in common? A public safety response that involves multiple agencies, all of them with their own communication tools that sometimes don’t work very well together.

Until now.

On March 30, 2017, the First Responder Network Authority formally announced that AT&T had received an award to begin building FirstNet, the country’s first nationwide public safety broadband network. Although it will take several years before all of the new infrastructure and features are in place, the concept becomes operational this fall through use of AT&T’s existing spectrum and infrastructure. State implementation plans went out in mid-June, and by October, those plans will have been tweaked and potentially accepted by the states. At that point, a new era in public safety communications will be set to begin.

FirstNet, a project of the U.S. Department of Commerce, National Telecommunications and Information Administration, will provide public safety with advanced communication and collaboration technologies that will provide solutions for serving rural and underserved areas; reliability,
redundancy and resiliency; and access for a wide range of devices to include video, audio, still photography, maps and more. In all, that adds up to a lot more than just interoperability.

Sheriff Rich Stanek of Hennepin County, Minn., a member of the FirstNet Board of Directors, says that FirstNet is the great non-discriminator, working with every agency and at every level: “No matter whether you’re a county sheriff, an FBI agent or you work with the Customs and Border Patrol, it will benefit you. Part of my job as county sheriff is to coordinate disaster response strategy, and FirstNet will give me a really beneficial tool because we’re all going to be able to talk to each other, launch the same applications and get the job done.”

Stanek, who will be a key part of the team providing coverage for Super Bowl LII on Feb. 4, 2018, says that before joining the board, he only knew of FirstNet as a word: “What FirstNet has been able to do to promote the network to not only chiefs and sheriffs, but also to the line officers, has been tremendous. I’m very impressed with the FirstNet Board of Directors because it brings together such a big cross sector of individuals who are very passionate about public safety.”

Another law enforcement veteran on the FirstNet team is former Los Angeles Police Department Chief Mike Bostic, who recently joined FirstNet as its senior law enforcement advisor after a second career in the telecommunications industry.

“In Los Angeles 10 years ago, we were talking about nationwide land mobile radio, and we knew the expense was so enormous, it was almost comical to think it could ever happen,” Bostic says. “Then the conversation shifted to broadband, which we all use all day long, and then it became feasible. FirstNet broadband will give us our own network where we’ll get priority pre-emption and better coverage. I think we can’t quite grasp yet all that means.”
Because AT&T already owns vast amounts of spectrum in addition to the 20 MHz gained with the FirstNet contract, public safety will gain immediate access to all networks and all Wi-Fi already available from AT&T. Building out FirstNet’s Band 14 will provide another overlay that will only enhance what’s available.

“We will always be in the diamond lane of data access,” Bostic says. “We won’t be watching spin-spin-spin while we wait for a download because there’s not enough capacity. In time of public safety need, it’s the others who will be bumped off, and all of that comes on Day One. When a state decides to opt in, they’ll gain immediate access to the existing AT&T network.”

And although agencies in remote and rural areas will have to wait until FirstNet is completely built out for optimum coverage, it is on its way.

States had 45 days to review the plans issued in June, ask questions and voice concerns. Final plans, revised to take into account the states’ input, will then come out in August and September. Bostic notes one of the largest dilemmas faced in devising the plans comes from state and federal restrictions on parks lands, where antenna sites are a no-go. However, AT&T is working on mobile capability and other potential solutions.

“We’re the first country that’s building a nationwide network like this, and we want to do it right so we can be a model for the rest of the world,” he adds.

For more information, visit FirstNet’s website at www.firstnet.gov, where you can sign up for one or more of its social media feeds, or contact Kyle Richardson at Kyle.Richardson@firstnet.gov.
Law enforcement aviation units with manned fixed-wing planes and helicopters can perform a variety of support tasks such as criminal search, crime scene photography, pursuits, emergency medical service transport, deployment and extraction of SWAT, and search and rescue.

But what happens if a law enforcement aircraft is in trouble? Because of the specialized nature of the unit, the Airborne Law Enforcement Association (ALEA) emphasizes how important it is for agencies to have an aviation emergency response plan (ERP) in place. An ERP can provide guidance to agency members with no aviation background who are responding to a law enforcement aircraft in distress, as well as help an agency plan for responding to any aviation crash or disaster.

“An aviation emergency response plan is something an agency may not think it needs because law enforcement agencies are organized to respond to emergencies, and so think they would figure it out as always,” says Bryan Smith, safety program manager for ALEA. “But I have found in talking to agencies that have had an aircraft incident that the existence of an ERP that is aviation specific makes all the difference. Often, the people who know how to look for an aircraft are the people in the aircraft. It is a complicated process knowing if the aircraft is in distress and then what to do.”
ALEA compiled a checklist of items agencies should address in an aviation ERP:

1. **Simple, clear ‘triggers’ to initiate ERP**
   
   Number of minutes overdue, Emergency Locator Transmitter (ELT) activation, notification from crew, etc. Usually initiated by a dispatcher or communications center.

2. **Means of locating aircraft**
   
   Access to flight tracking, Air Traffic Control (ATC) contact info, etc. How will you find a missing aircraft?

3. **Investigation responsibilities**
   
   Who will investigate if federal authorities do not? Who is trained for it? Do you have an incident investigation kit?

4. **Instructions on searching for missing aircraft**
   
   Who will search for the aircraft right after it goes down or goes missing? Do they know how to conduct a missing aircraft search? Include numbers for agencies who can assist.

5. **Instructions for securing an aircraft accident scene**
   
   Setting inner and outer perimeters. Who has access to the aircraft? Hazardous materials and scene security concerns.

6. **Complete contact list**
   
   All aviation unit members, federal or state investigation authorities, air traffic control, fire/emergency medical services, surrounding aviation units, etc.

7. **Family contact info**
   
   An aircraft accident will be big news. Get to the family before the news does. Do not forget about kids. Have extended family/friend contact info available to help assist the crewmembers’ families.

8. **Aircraft recovery plan**
   
   How will you recover it from a wooded area, swamp or water? Have options and phone numbers in place.

9. **Media instructions**
   
   When can you talk to the media? What can you say? What should the public affairs officer say?

10. **Post-incident plan**
    
    Will you cease operations for a period of time? Who will cover during that period? What critical incident mental health resources are available?

11. **Checklists**
    
    Have 1-2 page checklists for everyone with tasks to complete in your ERP. Include phone numbers and critical information on the list. Examples include: Communications Center, Patrol/Watch Commander or Supervisor, Unit Commander, Safety Officer, Director of Maintenance, etc.
It’s just a scientist driving to work. It’s just an off-duty officer out for her evening walk with her earbuds in. It’s just a college student taking a break from studying for his biology final.

It’s Just Science, a new podcast series produced by the National Institute of Justice (NIJ) Forensic Technology Center of Excellence (FTCoE), and they’re all listening, learning and catching up on information on innovative forensic technology.

Launched in May 2017, the weekly podcast series is moving quickly to the conclusion of its first 13-episode season, “Numbers,” which features topics such as optical topography, DNA mixtures, human factors and subjective probability.

The idea for the series came to Dr. John Morgan, senior director for the Center for Forensic Science at RTI International, because he wanted to expand the audience for the many scientific and other innovations discussed at conferences that many forensic scientists or police officers can’t attend. When he brought the idea to FTCoE Director Jeri Ropero-Miller, she recognized that podcasts could complement the FTCoE’s other efforts, and that, “The FTCoE is really trying to look at additional mechanisms of dissemination that match the way people get their information. Some people like to go to presentations, some like to read, others like to listen to podcasts.”
According to the program’s early ratings, (the amount of site traffic generated), Just Science is going to be “just a success.” The Center has been leveraging other work to provide content, with Morgan seeking out leading professionals in the field to sit down for a chat at forensic science conferences. The focus is on researchers who have done NIJ-funded studies, but the reach includes prosecutors, investigators and victim advocates as well as crime laboratory leaders.

Back at the FTCoE, staff turns the conversations into 30- to 45-minute podcasts that are available through most of the popular podcast delivery services. They’ve completed nearly 30 episodes, including many for the new seasons on drugs and cutting-edge case investigations.

“We’ll look at everything from vaping of marijuana to things having to do with opioids and how forensic science responds to drugs and crime in the second season,” Morgan says. “We’re looking for people to come to us and tell us about an interesting topic we should record, whether that comes in response to an announcement at a conference or through the form on the website.”

“Reaching out to attendees at a meeting has been very productive as far as helping us build a library,” Ropero-Miller says. “If someone wants to talk about a good subject that doesn’t fit into the series we’re currently developing, we’ll look for where it fits into a future series. We like having the guest and Dr. Morgan together at a meeting especially, because it produces better content as well as better sound quality.”

Morgan says he enjoys doing the work of hosting the series, which he feels serves as a way for professionals who don’t attend many conferences to pick up some of the information discussed at those events.

“The best part of a conference is talking to interesting people during the breaks and learning more about their work,” Morgan says. “The podcasts allow us to have those conversations and let others listen in. It’s great for me to be able to talk to them and have these conversations in a way that everybody can benefit.

“One of the recordings we did was with a law enforcement officer about Munchausen syndrome by proxy, talking about a mother who deliberately makes her child sick. It was a fascinating case and kind of disturbing as well, of course. There’s no question that law enforcement professionals will learn a lot from the podcast series because it’s an easy way to make forensic science accessible.”
“We’re interested in topics that are of interest to law enforcement. We’d love to get their suggestions about topics that are relevant to both law enforcement and forensic science, like how they can use forensic science to develop investigative leads,” he adds.

For both forensic science and law enforcement professionals who want to learn more about a particular topic after listening to a podcast, the FTCoE offers access to additional related resources, presenter biographies and more on the Just Science subsite, as well as access to all of the back episodes of the series.

“As project director, I’m thoroughly pleased and amazed at how quickly it’s taken off,” Ropero-Miller says. “It just goes to show that people are very interested in forensic topics, and this is yet another way that they’re willing to put in the time to hear what their colleagues have to say.”

To watch any of the episodes of Just Science, visit http://forensiccoe.org/just-science-podcast/. For more information on the projects and programs of the FTCoE, contact Dr. Jeri Ropero-Miller at jerimiller@rti.org. For more information on NIJ’s forensic science portfolio in general, contact Gerald LaPorte, Director, Office of Investigative and Forensic Sciences, at Gerald.LaPorte@usdoj.gov.
A variety of information is available from government and private sources to help law enforcement and corrections agencies understand issues surrounding unmanned aircraft systems (UAS). Following is a sampling of resources.

**Corrections Today.** November/December 2016. Article on “Eyes in the Skies: The Latest Threat to Correctional Institution Security.” This article examines the problems that improper use of unmanned aircraft systems can cause for correctional facilities. It provides an overview of how UAS can be used to smuggle contraband into facilities, presents detection and mitigation solutions, and looks at legal and policy considerations.

https://www.justnet.org/pdf/Craig-Russo-Shaffer.pdf
Federal Aviation Administration. The FAA has a number of resources available for operators and stakeholders regarding UAS operations, safety, regulation and guidance, which can be accessed within the menu on the main UAS page, https://www.faa.gov/uas/. For example:

- **B4UFLY**, a smartphone app provided by the FAA that helps unmanned aircraft operators determine whether there are any restrictions or requirements in effect at the location where they want to fly. Download instructions at https://www.faa.gov/uas/where_to_fly/b4ufly/.

- **Law Enforcement Guidance for Suspected Unauthorized UAS Operations**, Version 3, 8/11/2016, is intended to assist law enforcement agencies in understanding the legal framework that serves as the basis for FAA legal enforcement action against UAS operators for unauthorized and/or unsafe UAS operations, and to provide guidance regarding the role of agencies in deterring, detecting and investigating unauthorized and/or unsafe UAS operations. https://www.faa.gov/uas/resources/law_enforcement/media/faa_uas-po_lea_guidance.pdf


_FLETC Journal._ Fall-Winter 2016. This issue contains two articles related to UAS and law enforcement: “Unmanned Aerial Vehicles: Uses for Law Enforcement” and “Drones: Your Agency’s Best Friend or Worst Enemy.” The Federal Law Enforcement Training Centers provide training in areas common to law enforcement officers, such as firearms, driving, tactics, investigations and legal training. https://www.fletc.gov/sites/default/files/FLETC_Journal-Fall_2016-508.pdf

**International Fire Chiefs Association.** Unmanned Aerial Systems Toolkit. This website provides a starting point for fire and emergency service agencies interested in using UAS. The toolkit provides a starting point to examine tactics, policy, technology and research, and regulations and operations. https://www.iafc.org/topics-and-tools/communications-technology/uas-toolkit

**Justice Technology Information Center.** _Law Enforcement Guidance Concerning Suspected Unauthorized UAS Operations_. This white paper provides guidance to law enforcement agencies on how to assess UAS operations within their jurisdictions and suggests actions to interdict and mitigate unauthorized, illegal or risky operations. https://www.justnet.org/pdf/UAS-LEA-Guidance-White-Paper-7_8_16.pdf.
A video, *Eyes in the Sky: How Law Enforcement Uses Unmanned Aircraft Systems*, highlights the functionality of UAS and how the Mesa County Sheriff’s Office in Grand Junction, Colorado, uses the technology to assist in crime scene and traffic accident investigations, and offers law enforcement agencies tips to consider when standing up a UAS program.

https://www.youtube.com/watch?v=2gzeXn_Ooql.

Also visit the JTIC unmanned aviation page at https://justnet.org/law-enforcement/LE-aviation-UAS.html for general information.

**Know Before You Fly.** Know Before You Fly is an education campaign founded by the Association for Unmanned Vehicle Systems International and the Academy of Model Aeronautics in partnership with the Federal Aviation Administration to educate prospective users about the safe and responsible operation of unmanned aircraft systems.

http://knowbeforeyoufly.org/

**National Conference of State Legislatures.** The Current Unmanned State Law Landscape site on the NCSL website is periodically updated with information on state laws addressing UAS.


Taking Off: State Unmanned Aircraft System (Drones) Policies, explores state and federal policies related to UAS and is periodically updated.


**National Institute of Justice.** Considerations and Recommendations for Implementing an Unmanned Aircraft Systems (UAS) Program. This report is based on a 2015 convening of public safety stakeholders and aviation experts. The goal of the convening was to produce a blueprint for how law enforcement agencies can use unmanned aircraft systems most effectively, fairly and transparently. The report highlights actions agencies can take as they implement a policy on UAS.

https://www.ncjrs.gov/pdffiles1/nij/250283.pdf
National League of Cities. *Cities and Drones: What Cities Need to Know About Unmanned Aerial Vehicles (UAVs).* This 2016 report serves as a primer for local officials on federal rules regarding UAV operation and suggestions for how local governments can craft their own UAV ordinances to encourage innovation while protecting cities.
http://www.nlc.org/resource/cities-and-drones

Police Foundation. The *sUAS and Public Safety* infographic highlights operational, training and legal and regulatory compliance considerations for law enforcement agencies interested in using sUAS for public safety.

Community Policing & Unmanned Aircraft Systems (UAS): Guidelines to Enhance Community Trust. This 2016 report from the Police Foundation provides guidance on all aspects of UAS use in public safety, including operational, training, and legal and regulatory compliance considerations.

POLICE magazine. Article on “Getting Your Unmanned Aircraft Program Off the Ground” from August 2016 provides an overview of setting up a UAS program.

UAS for Public Safety – Working Group. This working group is to assist vetted public safety professionals integrate their programs into the National Air Space. To be a member of this group, you will be required to validate your membership and/or employment with a public safety entity or affiliate.
https://www.facebook.com/groups/UASPublicSafety/
TECHshorts is a sampling of the technology projects, programs and initiatives being conducted by the Office of Justice Programs' National Institute of Justice (NIJ) and the National Law Enforcement and Corrections Technology Center (NLECTC) System, as well as other agencies. If you would like additional information concerning any of the following TECHshorts, please refer to the specific point-of-contact information that is included at the end of each entry.

In addition to TECHshorts, JUSTNET News, an online, weekly technology news summary containing articles relating to technology developments in public safety that have appeared in newspapers, newsmagazines and trade and professional journals, is available through the NLECTC System’s website, www.justnet.org. Subscribers to JUSTNET News receive the news summary directly via email. To subscribe to JUSTNET News, go to https://www.justnet.org/subscribe.html, email your request to asknlectc@justnet.org or call (800) 248-2742.

Note: The mentioning of specific manufacturers or products in TECHshorts does not constitute the endorsement of the U.S. Department of Justice, NIJ or the NLECTC System.

Informational Brief on Drug Courts

National Institute of Justice, Office of Juvenile Justice and Delinquency Prevention, Bureau of Justice Assistance

This brief presents an overview of drug courts across the United States and resources for information.

There are more than 3,100 drug courts across the U.S., half of which are adult treatment drug courts. Adult drug courts use a program designed to reduce drug use relapse and criminal recidivism among defendants and offenders through risk and needs assessment, judicial interaction, monitoring and supervision, graduated sanctions and incentives, treatment, and rehabilitation services.

Juvenile drug courts apply a similar approach that is tailored to the needs of youth with substance use disorders through counseling, education, treatment and other services. Family drug courts emphasize treatment for parents with substance abuse disorders to aid in the reunification and stabilization of families affected by parental drug use. The programs apply the adult drug court model to cases entering the child welfare system that include allegations of child abuse or neglect in which substance abuse is a contributing factor.

Read the publication at https://www.ncjrs.gov/pdffiles1/nij/238527.pdf.
Toolkit to Support Law Enforcement Responses to Children Exposed to Violence

Office of Juvenile Justice and Delinquency Prevention

A toolkit is available to help law enforcement effectively respond to children exposed to violence.

*Enhancing Police Responses to Children Exposed to Violence: A Toolkit for Law Enforcement,* was developed by the International Association of Chiefs of Police and the Yale Child Study Center with funding from the Office of Justice Programs’ Office of Juvenile Justice and Delinquency Prevention.

Police officers are frequently the first responders to situations that pose threats to the safety and well-being of children and families, and are therefore in a position to identify children at risk and initiate the process of recovery for children and families. The toolkit is designed to equip law enforcement professionals with trauma-informed, developmentally appropriate tools to identify and minimize threats to child safety, foster closer engagement between law enforcement and youth, and maximize officer safety and positive outcomes for children and families.

The toolkit contains protocols, checklists and other field-tested and research-informed resources. For more information and to access the toolkit, see http://www.theiacp.org/children-exposed-to-violence.
Following are abstracts on public safety-related articles that have appeared in newspapers, magazines and websites.

**Nevada Lands Grant to Launch Anti-Bullying App, Will Contribute to National School Safety Research**

*The Nevada Independent, (07/05/2017), Michelle Rindels*

Nevada will set up a Safe to Tell hotline and reporting app starting in 2018 that will allow students to report bullying or potential threats. Researchers supported by the National Institute of Justice will analyze data about the hotline’s usage and response techniques to determine whether having it contributes to a better school climate.


**Alabama Prisons Aim to Add Technology to Further Inmates’ Education**

*EdTechTimes, (07/03/2017), Jessica Filippone*

The Alabama Department of Corrections is adding tablets and secure wireless network connections to prisons to provide inmates with educational training. The training curriculum would include such topics as adult basic literacy, life skills, general educational development services and entry-level vocational training. The tablets would not have access to the Internet.

http://edtechtimes.com/2017/07/03/alabama-prison-add-technology-increase-inmates-education/

**City Unanimously Approves $100K Grant for Ithaca SWAT Team Equipment, Training**

*The Ithaca Voice, (07/06/2017)*

Police in Ithaca, N.Y. will use a $100,000 grant to purchase new equipment and fund overtime pay for training. The grant from the Department of Homeland Security and approved by the city’s Common Council is intended for new equipment, including night vision helmets, breathing apparatus, radar, cameras and robot technology.

https://ithacavoice.com/2017/07/city-unanimously-approves-100k-grant-ithaca-swat-team-equipment-training/
JUSTNET News. Includes article abstracts on law enforcement, corrections and forensics technologies that have appeared in major newspapers, magazines and periodicals and on national and international wire services and websites.

Testing Results. Up-to-date listing of public safety equipment evaluated through NIJ’s testing program. Includes ballistic- and stab-resistant armor, patrol vehicles and tires, and more.

Calendar of Events. Lists upcoming meetings, seminars and training.

Social Media. Access our Facebook, Twitter and YouTube feeds for the latest news and updates.

Tech Topics. Browse for information on law enforcement, corrections and courts technologies.

Public Safety Technology in the News. Click here for recent public safety-related articles from the news media.

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