

BY DONNA ROGERS, EDITOR

# Top Technologists

*Courts Today has selected four judicial and public sector technology innovators to provide insight on vexing problems in the criminal justice/judicial system, and to suggest ways digital platforms may be integrated into our professional lives to support our quest for sharing the right kind of data at the right time with the right agencies and officials.*



**Alec Ross, CTC Keynote  
and public policy maker**

*Q: Having led the State Department's efforts to find practical technology solutions for some of the globe's most vexing problems on health care, poverty, human rights and ethnic conflicts, could you comment on why you think the U.S. has the highest incarceration rate?*

A: There are many factors that have contributed to the U.S. having the world's highest incarceration rate. Interestingly, I think one reason for it is that we actually have a functional system for the rule of law. I have travelled all over the world and been in countries where the incarceration rates are lower, but it is not because there is less crime, it is because policing and the judicial systems are corrupt or incompetent.

Another reason for the high incarceration rate is the prevalence of guns in the U.S. With up to 310 million guns in the hands of U.S. civilians, it is only natural that the country has to deal with a larger number of gun-related crimes. Despite all of its technological and economic advances, the U.S. is ranked #8 worldwide in murders per year.

A third cause for the nation's high incarceration rate is one that hits very close to home, the concentration of poverty in both urban and rural areas leading to increased

crime rates. This can especially be seen in youth populations in these areas. During my experience teaching at Booker T. Washington Middle School in Baltimore, I saw firsthand the violence that ensues in low-income areas. Many of my eleven- and twelve-year-old students were involved in gangs and often involved in violent acts. As these children involve themselves in these types of acts at such a young age, it is only natural that they will soon fill up the U.S. prisons.

*Q: As an "innovator" and as one of top 10 "game changers" in politics, what steps would you suggest to change our criminal justice system to stop the relentless cycle of crime and punishment?*

A: There is no one simple answer to this question. I think it is going to take decades of effort from across sectors including education, law enforcement and workforce development. For starters, we need to

provide more support for our youth afterschool activities, especially in low-income urban areas. Kids in high-crime areas without anything to do after school are going to get in trouble. There is no technological fix to that. There is no app for that. What is needed is meaningful, professionally-administered afterschool programs.

**Q. Do you see a technological element to achieve a transformation in the criminal justice system? From your experience, what are some of the processes that could be changed with technology to make the justice system more effective and efficient?**

**A:** Our criminal justice system needs to move from the 20th Century to the 21st Century. While there currently is not one magical piece of technology to achieve a massive transformation in the criminal justice system, there are many processes that can be changed using technology to make the justice system more effective and efficient. Just as electronic medical records systems are revolutionizing the medical field, electronic filing, electronic court records, and electronic data management systems are having positive effects on the criminal justice system. They are reducing court costs, making documents more readily available, and improving general court operations.

Another technological area that has had a positive effect on the justice system is video technologies. In addition to reducing costs, video-conferencing provides both convenience and security that previously did not exist.

I also think that criminal justice needs to embrace the mobile technology revolution. Just about every person in America owns a mobile phone and uses SMS, better known as text messaging. We need to use mobile devices as a sort of "personal

infrastructure" that can be leveraged to increase communications and collaboration by all stakeholders in the criminal justice system.

When I was working for Hillary Clinton at the State Department we put in place a program in the narcotics cartel-controlled cities in Northern Mexico that was hugely successful. Because of the high level of cartel infiltration into police forces, citizens were no longer reporting crime and this had a HUGE impact on the police's ability to maintain order in these tough communities. We came up with an idea of creating a program in which people could anonymously report crime using their cheap cell phones over encrypted text messages. This restored confidence in crime reporting and gave the police the intelligence they needed to be effective. This same kind of out-of-the-box thinking leveraging new technology to address old problems can be applied in the USA.

**Q. Given that government, especially some branches of criminal justice, have limited funding and are thus slow to adopt the latest technologies, in what ways do you suggest criminal justice entities as well as individual professionals can incorporate digital platforms into their daily lives?**

**A:** I think digital platforms are already incorporated into the daily lives of individual professionals but the institutions, the criminal justice entities, are slower to change. Smart phones have truly revolutionized society, allowing people to have 24/7 access to vital e-mails and additional information. One can provide a breathalyzer, record an encounter, or handle finances from his or her phone. These applications can be used both by criminal justice entities and individual professionals.

The futuristic successes with phones should show people the potential for technologies without

being afraid of them. This includes using e-filing systems or other digital systems that have left people uneasy in the past. When I led Civil Society 2.0 at the State Department, we set out to create online communities and form text-messaging campaigns. Better use of big data can be used to narrow down threats and tips. Technology allows us to more easily catch lawbreakers, sometimes even before the crimes take place. Despite limited funding, we can successfully implement technology into our daily lives. At the end of the day, technology is solely a utensil but it is up to us to decide how to successfully use it.



**Honorable Robert J. Torres, Jr.,  
Justice, Supreme Court of Guam**

**Q: As a professional working in the U.S. court system to ensure justice for all Americans, could you comment on why you think the U.S. has the highest incarceration rate?**

**A:** Tough sentencing laws, record numbers of drug offenders and high crime rates have obviously contributed to the United States having the largest prison population and the highest rate of incarceration in the world. Policy changes such as "mandatory sentencing" (mandatory minimum), "truth in sentencing" and "three strikes" laws have also diminished judicial discretion in

sentencing and parole release.

But sentencing, drugs and crime are only part of the story. Shortcomings in various social programs including those dealing with education, poverty, urban development, health care and child care have resulted in more individuals ending up in the criminal justice system. This vicious cycle of social failures, criminality and incarceration ensnares too many Americans and weakens many communities.

**Q: As a leader in the courts system, what steps would you suggest to change our criminal justice system to stop the relentless cycle of crime and punishment?**

A: Rehabilitation programs, reentry programs, alternatives to incarceration and a revision of the penal codes may stop the growth of prisons and jails. A strategy should incorporate three areas of sentencing reform: doing away with prison penalties for ordinary drug crimes, eliminating mandatory minimum sentences for other felonies, and abolishing technical revocations of probation and parole.

Increased utilization of risk and offender assessments, incorporating restorative justice, evidence-based programs, best practices, community based treatment, strict monitoring and accountability, will also result in more meaningful, measurable outcomes.

However, criminal justice reform and a rehabilitative criminal justice policy cannot single-handedly solve the problems with incarceration rates. Reversing mass incarceration will ultimately require that social problems be solved with social policies and resources to aid ex-offenders in obtaining job training, employment and housing.

**Q: Do you see a technological element to achieve a transformation in the criminal justice system?**

A: We have witnessed firsthand a technological transformation of the criminal justice system in Guam with the launch of a new case management system and the Virtual Computerized Criminal History (VCCH) in April of this year. The VCCH employs a message switch that retrieves arrest data, prosecutorial status, court disposition, and incarceration/parole data, and formulates these components into a complete criminal history record. The VCCH is NIEM (National Information Exchange Model) and XML (eXtensible Markup Language) compatible, which meets justice system standards.

One must recognize, however, that other developments in computer, medical and biometric technologies that have led to many positive advances for society and the civil justice system may also profoundly impact a wide range of substantive constitutional rights, privacy and civil rights. Technology has also brought about several legal dilemmas that complicate the legal landscape related to the admissibility of scientific and technical evidence into court cases, and what constitutional and civil liberty rights may be violated by the utilization of new technologies.

**Q: What ways do you suggest criminal justice entities as well as individual professionals can incorporate digital platforms into their daily lives?**

A: It is essential that court personnel learn about social media tools to communicate with and educate the public. Interactive websites are also in demand and justice agencies need to consider what users need and the best practices for providing these services. The explosion of powerful, convenient and multi-purpose smartphones and tablets requires responsive Web design that accommodates a wider variety of screen sizes and techno-

logical compatibility. These devices are changing how people like to interact with courts and we must accommodate.



**Thomas Clarke, Vice President for Research and Technology, National Center for State Courts**

**Q: Do you see a technological element to achieve a transformation in the criminal justice system?**

A: Yes, I do see technology supporting a growing revolution in criminal justice. We are seeing an evidence-based shift from wholesale incarceration to a wide variety of systemic responses, depending on the characteristics of offenders. Risk and needs assessments are used to determine which offenders are most amenable to appropriate diversion and treatment programs at various points in the criminal justice process. We now know that some offenders should not be treated, others should be treated using certain programs and not other programs, and yet others should be simply locked up in the traditional fashion as high risks to public safety.

Technology is already starting to support this revolution by making it easier to implement. Risk and

needs assessment instruments require valid data about individual offenders and classes of offenders in order to make appropriate recommendations. In the past, access to such data has been both difficult and expensive. As a result, valid recommendations were either not forthcoming or not timely. Also, some assessment instruments were not properly validated. Now, modern data and interface standards are making data much easier and cheaper to access. It is even becoming possible to automate access and privacy policies, so that data can be safely shared in appropriate ways.

Many steps in the criminal justice process can be optimized by sharing the right kind of data at the right time with the right agencies and officials. As just one example, sex offenders are supposed to report and register when they move from one state to another. This has been done using a manual paper process that is both cumbersome and slow. A national system is now being set up for automated near-real time exchanges of this information.

**Q: Can you comment on specific types of technologies that can aid in our criminal justice/court systems?**

A: Several specific types of technology are definitely helping criminal courts operate both more efficiently and effectively. Electronic case filing is the example that is currently most prominent, and it is a big step forward in several ways. Many practitioners now speak about e-courts, since electronic filing spurs and requires a broader set of technologies, including electronic court case files and electronic notifications of various kinds. Modern court case management systems support so-called event-driven pushes of information to judges, court staff, other justice agencies, and litigants.

A technology whose use in the

courts is just now starting to grow rapidly is videoconferencing. Its first use is usually for criminal arraignments, since the ability to avoid moving offenders between jails and courts saves money and time while increasing safety. However, the current surge is driven by the need for courts to provide interpreters in a cost effective way. Remote interpretation was rare only a few years ago. Now, it is used in a number of state court systems and there is even talk of setting up a national "cloud" capability.

**Q. What ways do you suggest criminal justice entities as well as individual professionals can incorporate digital platforms into their daily lives?**

A: There are several aspects of current technology that make it easier and less expensive to implement than older technology. First, much of it is based on open standards that are widely implemented in commercial off-the-shelf products. Second, the products themselves are becoming significantly less expensive as they become more commodified; that is, software for criminal justice agencies is more mature and more standardized than in the past, and thus made a commodity.

Another obvious help is the Internet. It is almost impossible to over-hype the value and benefit of online strategies. The Internet provides a very inexpensive network to everyone that can be safeguarded in ways that meet criminal justice agency requirements for security at little expense these days. New system interfaces can be literally set up in days that take advantage of these network connections.

Specifying open business models for technology is a beneficial and growing change. One group that has supported these changes is the Global Justice Information Sharing Committee, a federal advisory committee to the U.S. Attorney General.

It has existed since 1998 as a voluntary collaboration of all the major state and local justice associations. Global has fostered a significant increase in national collaboration around technology and information sharing. It is difficult to over-estimate the value of this kind of work.

The biggest hindrance to more widespread adoption of technology in the criminal justice world is not budget constraints, but issues around policy, governance, and control. We are sometimes our own worst enemies. It requires a certain amount of trust and cooperation to effectively put in place the kinds of solutions we are talking about here. Much progress has been made over the last decade or so, but we can still do much more. The great thing about this problem is that it requires very few new resources to solve. It is really about people deciding to do the right thing.



**Snorri Ogata, CIO, Orange County, CA,  
Superior Court**

**Q: Do you see a technological element to achieve a transformation in the criminal justice system?**

A: I think many courts have already made significant progress in process

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automation and/or re-engineering within the four walls of the Court. The real opportunities, however, will come when the processes of the justice system are optimized together across organization boundaries.

While Orange County has had many successes connecting with our justice partners (e.g., District Attorney, Probation, Public Defender, Sheriff, variety of City Police Departments), the processes all mimic the old paper-world flow. While it certainly has worked through the years, it falls short because many activities are done multiple times.

## Devices such as smartphones and tablets are changing how people like to interact with courts and we must accommodate.

A simple example is person identification. Every partner in the County justice system has an elaborate process to ensure that "John Smith" is the right "John Smith." This is understandable since it is critical to all of our processes that we know all other instances where "John Smith" has activity in our justice system. Yet we all go about verifying "John Smith" separately, multiple times. What stops us from all agreeing that some entity is responsible for overall person identification?

I suspect the answer to the question is that we are historically motivated to optimize our processes within each organization. I would argue that the big opportunity involves placing the "person" (e.g., the child or the defendant) at the center of our processes and to optimize the flow of information in support of decision-making across the silos of individual departments or agencies.

**Q: Can you comment on specific types of technologies that can aid in our criminal justice/court systems?**

**A:** In the world of technology there is a nexus of forces at play that is transforming how work is performed and how people go about their daily lives. The Gartner Group, a leading technology advisory company, identifies these four "forces" as social, mobility, information and cloud.

**Social:** Social technology is much more than Facebook and Twitter! It is technology that connects people with one another and supports their interactions. It's hard to imagine social without its counterparts mobile and

"documents" and pictures and videos, to name a few).

**Cloud:** The Cloud enables delivery of information and functionality to users and systems. Examples of Cloud technologies in criminal justice are: Cloud vendors like Legal Zoom automating work historically done by attorneys; internal email systems taken to "the cloud" to achieve cost savings, and in some instances, improved service (Microsoft Office 365 and Google Apps); and real-time (and official) transcripts available online for download and archival storage.

**Q. What ways do you suggest criminal justice entities as well as individual pro-**

—CHIEF JUSTICE ROBERT TORRES, JR.



**fessionals can incorporate digital platforms into their daily lives?**

**Cloud,** which highlights the convergence. Justice examples include: Web-based connections or API to connect others to your data in support of delivering services; technology to facilitate internal communications (e.g., Microsoft SharePoint); technology to facilitate communications with the Public (e.g., Microsoft Dynamics).

**Mobility:** The heart of mobility is location and device independence. Besides the smart phone, this includes tablet computers, cameras, and any computing "thing" that is able to interact with and connect to the Internet or a network.

**Information:** Information is at the core of justice and "informed" decision-making. While technology has certainly improved our ability to access and organize information, the change that is occurring now is being driven by volume, velocity and variety (beyond "data" there are

**A:** As the population in general gets more comfortable with these technologies in their personal lives, they will become more confident of their application in their professional lives.

There are probably three key things that every justice partner should be doing now to get ready for the future: (1) Align behind technology standards; (2) find communities of shared interests to pool resources to accelerate innovation and keep costs in line; and (3) think "apps" not monolithic systems.

**Standards:** Fortunately much work is already occurring in this area. Where the justice community can have its greatest impact is in the area of information, or data-sharing standards. Much of this work is being driven by the folks at NIEM

(www.niem.gov). We should all adhere to and embrace these standards wherever possible. They are not perfect, so some will need to be involved in the standards-making process. This is, however, a critical first step. Technologies that are built on standards are more easily shared.

Communities of Shared Interests: Courts across the country are beginning to collaborate more and more with one another, i.e., the Courts in California are freely collaborating and sharing with one another. A solution that works in PA can often be adapted in CA (and vice versa). Regardless of the reasons we find we need to inno-

vate and share, we quickly come to realize that we have more in common than not, and there are significant benefits in collaborating with others in working through the problems.

Apps: As individual courts and other justice partners slowly begin upgrading their underlying technology consistent with standards, they will be able to take advantage of these shared applications. The success of apps is that they are small applications designed for a specific purpose. The power behind apps (and web-services) is that they perform a handful of things very efficiently and (typically) are platform independent. Many Courts are building apps and Web-services to share case information or to enable the payment of a fine. The app, in turn, may be used in a variety of other different contexts (e.g., accept a payment over the Internet).

The assumption going forward

should be that, by natural evolution, the nexus of forces will impact everyone. All system users will be accustomed to using personal devices to accomplish tasks that could historically only be done at a desktop inside the four walls of an agency.

Big, expensive, mono-lithic systems are a thing of the past. Agencies can innovate on a small scale and find ways to incorporate this new communication paradigm into their planning and visioning process. Remote access should be considered the norm, and in-person contact the exception, for everything. Every area of the justice system that involves physically moving people and then having them wait should be critically examined.

The question should be: How can we take advantage of the "nexus of forces" in order to drive transformative change into a legal system steeped in a paper/in-person culture?

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## TECHNOLOGIST BIOS

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*Honorable Robert J. Torres, Jr. is a Justice of the Supreme Court of Guam and a Justice Pro Tempore for the Supreme Court of the Commonwealth of the Northern Marianas Islands. He has presented to*

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*Tom Clarke has served for the last eight years as the Vice President for Research and Technology at the National Center for State Courts. Before that, Tom worked for 10 years with the Washington State Administrative Office of the Courts, first as the research manager and then as the CIO. As a national court consultant, Tom speaks frequently on topics relating to effective court administration practices and the redesign of court systems.*

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*Ed. Note: Not all questions were answered by all respondees. Answers were edited due to space constraints.*