Comics Journalism
An illustrated guide to visual storytelling

Editing Is Altering
Al Tompkins offers tips for navigating the perils of production

Which Chart Should I Use?
A primer on designing effective data visualizations

The Investigative Reporters & Editors Journal

THIRD QUARTER 2018

Show, Don't Tell

Surveillance videos fuel an investigation into Florida's juvenile justice system.

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EMPOWERING OUR FUTURE.

Lumina Foundation is an independent, private foundation in Indianapolis that is committed to making opportunities for learning beyond high school available to all. We envision a system that is easy to navigate, delivers fair results, and meets the nation's need for talent through a broad range of credentials. Our goal is to prepare people for informed citizenship and for success in a global economy.

Lumina™ FOUNDATION

luminafoundation.org

CONGRATULATIONS

OREGONIAN MEDIA GROUP // "KEPT IN THE DARK" // 2017 FOI AWARD FINALIST

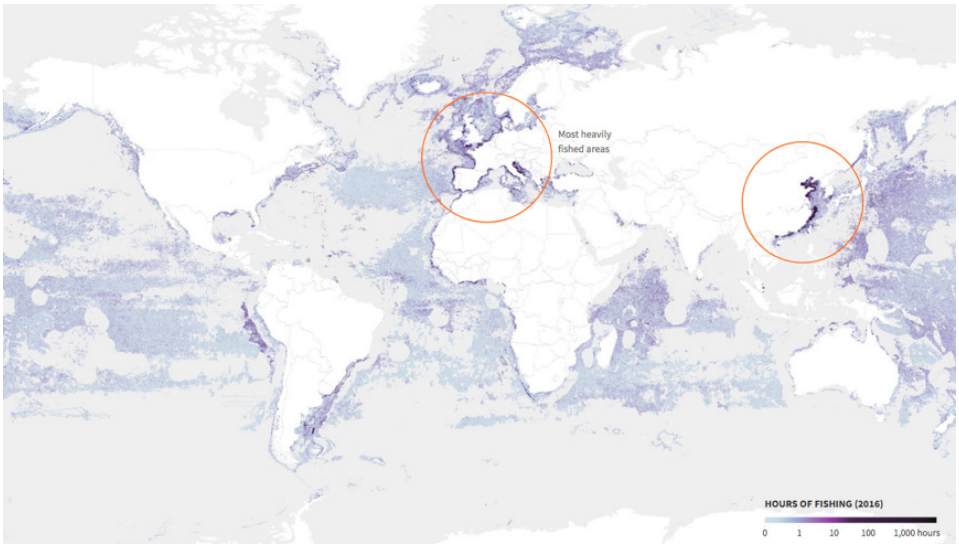
FROM THE JUDGES:

"This investigation brought to light Oregon's outrageous hidden elder-care facility problems through web-scraping and data analysis to create a public resource."

ADVANCE LOCAL

IRE Journal

THIRD QUARTER 2018



VISUAL INVESTIGATIONS

Conference planning: The ultimate jigsaw puzzle

Imagine 430 jigsaw puzzle pieces. Each represents a speaker at a national IRE conference. Each piece is color-coded for gender, race, geography and news platform.

Next, picture 210 mini puzzles. These represent panels, demos, hands-on classes or other sessions. Each puzzle needs one to five pieces. Oh, each puzzle also should be a mosaic of color — definitely no all-blue, male puzzles.

You're not done yet. Each puzzle needs to be placed in a room, based on how many people you think will attend. Room capacities range from 30 to 800 people. Put a puzzle in the wrong room and you'll end up with a cavernous ballroom with only 20 attendees or a room bursting with an overflow crowd.

Welcome to conference planning!

Unlike other journalism organizations, IRE hosts two massive national conferences each year — just three months apart.

As our conferences grow, we've realized we need to work further in advance to ensure high quality. This year, we posted our schedules earlier than previous years, knowing many attendees need a tangible program to persuade their supervisors to send them.

To do that, we've backed up our deadlines and planning. That's why we're seeking pitches through September for the CAR Conference, even though it's not until March. Submit your ideas online at bit.ly/ideasnicar19. Typically, we receive several hundred ideas for sessions, speakers and hands-on classes — far more puzzle pieces than we can fit.

A larger content planning team of IRE staff now helps review submissions, analyze what worked well in previous years and assemble the puzzles. And because the IRE staff is data-driven — OK, some of us are downright data nerds — the team created a planning tool we dubbed Super Grid. It's basically a turbocharged Google Sheet with multiple tabs, formulas, tags and a visual dashboard. With Super Grid, we tracked skill levels during NICAR18 planning to ensure we had an appropriate mix: 37 percent general interest, 18 percent beginner, 31 percent intermediate and 14 percent advanced.

For NICAR19 in Newport Beach, we hope to post the schedule in mid-January. So please get your ideas in now. If you wait until closer to the event, the program will likely be set. For IRE19 in Houston, we'll seek ideas in December and January.

If your idea isn't selected or you aren't asked to be a speaker, please don't feel discouraged or slighted. We're intentionally working to bring new voices to our programming while continuing to tap longtime experts.

Our ultimate mission: producing conferences that empower and equip you to thrive as watchdogs. ◆

Doug Haddix
Executive Director of IRE and NICAR

doug@ire.org, 573-882-1984 or on Twitter @DougHaddix

Contact IRE
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573-882-2042

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Jailed Reuters reporters receive Don Bolles Medal

Two Reuters journalists, arrested while reporting on human rights abuses in Myanmar, received IRE's Don Bolles Medal.

The medal recognizes investigative journalists who exhibit extraordinary courage in standing up against intimidation or efforts to suppress the truth about matters of public importance.

Wa Lone and Kyaw Soe Oo have been imprisoned since December 2017.

The Don Bolles Medal was created last year in conjunction with the 40th anniversary of the Arizona Project, an effort led by IRE to finish the work of Don Bolles, an Arizona Republic investigative reporter killed in 1976 by a car bomb.

Read more at bit.ly/DonBollesMedal2018.

City of Atlanta wins 2018 Golden Padlock

IRE named the City of Atlanta as the winner of its annual Golden Padlock Award recognizing the most secretive U.S. agency or individual.

Atlanta was selected for directing city staff to block records requests and for releasing false invoices that triggered a criminal investigation into alleged violations of Georgia's Open Records Act.

Finalists included Texas Attorney General communications director Marc Rylander; the City of Riviera Beach and Councilman Terence Davis; the Ohio Department of Rehabilitation and Correction; the U.S. Department of Agriculture; former Missouri Gov. Eric Greitens; and Sioux Falls Mayor Mike Huether.

Read more at bit.ly/Padlock2018.

Seven elected to IRE Board of Directors

IRE members returned three incumbents and elected four new members to the organization's board this June.

Incumbents Jill Riepenhoff of Raycom Media, Nicole Vap of KUSA/9NEWS Denver and Lee Zurik of WVUE-New Orleans were joined on the board by Matt Dempsey of the Houston Chronicle, Jennifer LaFleur of the Investigative Reporting Workshop/American University, Norberto Santana of the Voice of OC and Jodi Upton of Syracuse University.

The membership also elected two members to the Contest Committee: Jonah Newman of the Chicago Reporter and Jim Polk, a retired journalist.

Read more at bit.ly/IREBoard18.

So many stories lend themselves to a map, whether it's to show data or tell a story. Try one (or more) of these nine tools.

Mapping

PREPARE YOUR DATA

Census Geocoder
bit.ly/censusgeo

Free

The Census Geocoder will convert up to 10,000 addresses at a time into latitude and longitude coordinates. Let the geocoder find the state, county, census tract and more. All you have to do is upload a CSV file (formatted to the Census Bureau's specifications) and click a button to get the data. Export the results as a CSV and you're ready to map.

Geocode by Awesome Table
bit.ly/geoawesometable

Free

This Chrome plugin allows you to geocode addresses inside a Google Sheet. And it allows you to drop your data onto a Google map — no coding required. One warning: The plugin uses Google's API, so you can only request up to 2,500 conversions per day.

+1 from Cody Winchester, *IRE Training Director*

"More accurate than most open-source geocoders, and you don't have to supply a credit card number to use the API."

OpenCage Geocoder
opencagedata.com

Free, but paid options get you more requests

This geocoder provides quick and accurate single-address searches. You can make up to 2,500 requests every day for free, or pay to get more. OpenCage will display your results as plain text, JSON, GeoJSON or XML.

MAKE YOUR MAP

Web Map Maker
bit.ly/LATmapmaker

Free

This tool by the Los Angeles Times is great for making maps to fit print column widths, but you can also export vector images for online. Use the live preview to quickly make a map, or check out the GitHub repository to build a custom map maker for your publication.

Mapbox
mapbox.com

Free, with pay-as-you-go

Simple and clean, this tool gives you a variety of features and styles for your map. You can customize not only the look of the map, but also how the user interacts with it. The free version allows about 50,000 views per month before you get charged.

GeoJson.io
geojson.io

Free

This tool works in your web browser and allows you to build the general structure of your map in a live preview, automatically generating the code. Upload your data as a CSV and use the map editor to add points, shapes or lines. Copy the code straight into a tool like Leaflet.js, where you can customize and export your work for publication.

Tableau
tableau.com

Tableau Public is free; IRE members get free Tableau Desktop upgrades

Create interactive maps and charts with Tableau's easy-to-use interface. Connect your maps and other visualizations so they respond in tandem. Tableau Desktop allows you to develop stories in private and publish to the web when you're ready. IRE members: Learn how to request a free Desktop account at bit.ly/IRETableau.

IRE members share their favorite mapping tools and examples

JAYME FRASER
Investigative reporter with the Malheur Enterprise and ProPublica's Local Reporting Network

StoryMapJS

storymap.knightlab.com
Free

Analyzing emails and data for the Houston Chronicle, I discovered that 1,090 months of rent from two Texas housing authorities went unused in one year, even as hundreds of homeless veterans seeking help were put on waiting lists.

To complement the story, I used StoryMapJS to recreate an interview with a former Marine. He showed me and photographer Marie De Jesus the benches, bushes and bridges he called home while waiting for help.

The map (bit.ly/HomelessMap) allowed readers to follow his path in a narrative, interactive way. His personal story could stand alone without interruption from the policy discussions or my research findings.

CHRISTINE JEAVANS
Data journalist, BBC News

QGIS

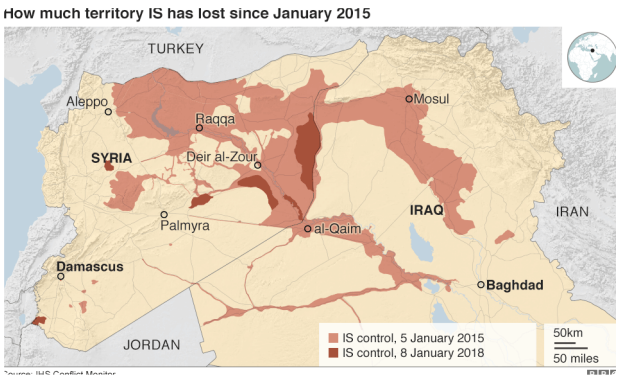
qgis.org
Free

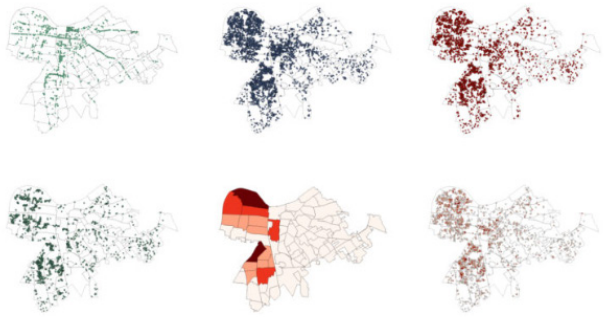
We use QGIS regularly for flat maps, including choropleths, point data and showing shapes, such as Islamic State control in Syria and Iraq.

The Atlas function is also a great tool and we recently generated a set of 654 detailed local maps with it for a crime data story.

I like the way QGIS is fully customizable and can be used in a straightforward way – like showing a range of data – or in a complex way, depending on what's needed.

The high level of functionality can mean it's hard to learn at first (and the updates keep changing!), but there is a lot of online community support.





+1 from Alexandra Kanik, data reporter and interactives developer for Louisville Public Media

"Clustering QGIS point data is a great way to show readers where events frequently happen. But this sort of analysis isn't just for display. You can use clustering (also called 'hexbin analysis') as a discovery tool to help you go into the community and interview people who live near those high-occurrence zones."

 By **Julie Christie**, *IRE & NICAR*

School supplies

Students across the country are heading back to school, which makes this **the perfect time to tell a data-driven education story**. We asked two reporters to deconstruct their data stories and share tips for replicating them in your own community.

Intermediate Level **Hannah Sparling**, *Cincinnati Enquirer*

After spotting a major discrepancy in the number of suspensions or expulsions reported by one Cincinnati high school, Hannah Sparling created her own database of school discipline rates. **She found that most of those punished were minority students and that teachers determined what behaviors would be punished.**

Tools
Excel, Tableau

Link
bit.ly/DisciplineAnalysis

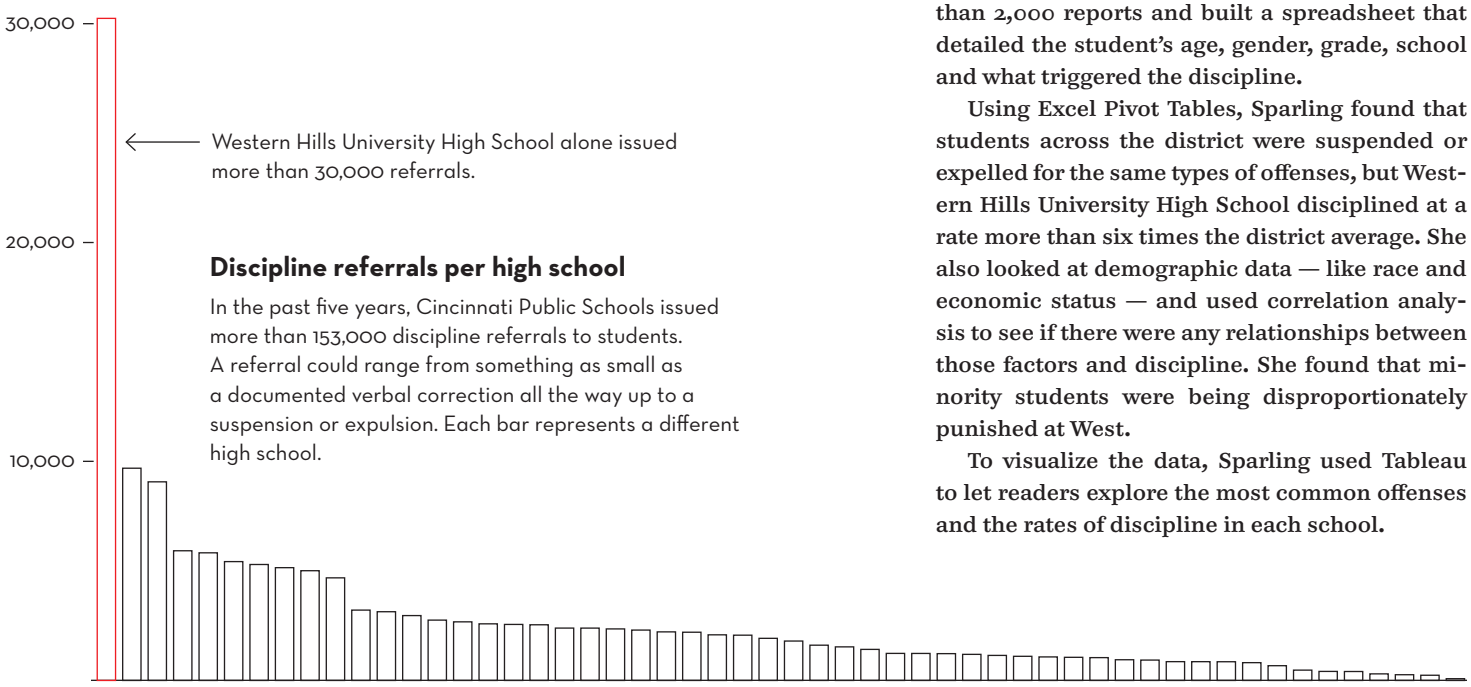
The story idea was tucked in a packet of agendas, schedules and meeting minutes Sparling picked up every week when she covered education. One packet included overall discipline rates for each public school in Cincinnati, and Sparling noticed that Western Hills University High School was suspending or expelling its students at a rate of 71 per 100 students.

Sparling requested the suspension and expulsion reports from schools with the highest and lowest discipline rates, ultimately narrowing it down to nine high schools for comparison. The reports redacted the names of students who had been disciplined but included their gender and grade.

The district wouldn't send the reports electronically but agreed to provide printed copies. And while officials didn't charge Sparling for the records, it took three trips to collect the boxes of documents. Sparling went through more than 2,000 reports and built a spreadsheet that detailed the student's age, gender, grade, school and what triggered the discipline.

Using Excel Pivot Tables, Sparling found that students across the district were suspended or expelled for the same types of offenses, but Western Hills University High School disciplined at a rate more than six times the district average. She also looked at demographic data — like race and economic status — and used correlation analysis to see if there were any relationships between those factors and discipline. She found that minority students were being disproportionately punished at West.

To visualize the data, Sparling used Tableau to let readers explore the most common offenses and the rates of discipline in each school.



Advanced Level **Kenny Jacoby**, *Palm Beach Post*

A photo retrieved using the Wayback Machine shows the FAU women's track and field team with 38 athletes in uniform during the 2016-17 school year.

Kenny Jacoby knew something wasn't right when he saw the number of female track athletes Florida Atlantic University reported to the Department of Education. **A look at the school's online roster showed it reported more than 50 female athletes who didn't exist.**

Tools

Excel, Tableau, The Wayback Machine

Link

bit.ly/FAUathletes

In 2016, FAU had the worst representation of female athletes in Division I schools at 31 percent. A year later, FAU claimed it closed the participation gap, reporting that women now made up 51 percent of the school's athletes.

To find out what happened, Jacoby downloaded publicly available data from the Department of Education. Schools receiving Title IV funding, which is tied to participation in federal student aid programs, must annually disclose data under the Equity in Athletics Disclosure Act (EADA). The database had more than 1,000 columns and tends to have missing records because universities self-report the numbers online, automatically populating the database. Jacoby used Excel to clean the data, checking to see if universities broke down their reports by campus and making sure schools weren't listed twice.

When Jacoby cross-referenced the federal data with the number of athletes listed on FAU's website, he found most of the women's track athletes FAU reported to the Department of Education didn't exist. FAU reported having 98 athletes. The team's own roster showed no more than 43, and the team photo showed 38. Jacoby used the Wayback Machine to find old FAU athletic rosters, which get overwritten on the university's website each year.

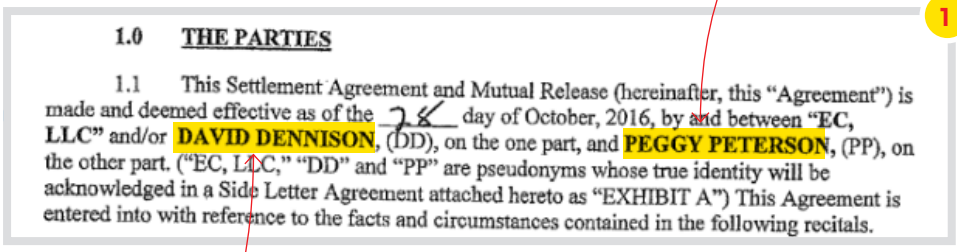
The EADA data also contained information on scholarships to male and female athletes, which allowed Jacoby to look at the financial consequences of the misrepresentation. While FAU appeared to increase the number of female athletes, it did nothing to boost the amount of scholarship money awarded to women. Before adjusting the numbers to reflect the accurate number of female athletes, Jacoby found only 36 cents of every scholarship dollar went to women. Male athletes received the other 64 cents per dollar. An attorney who reviewed the numbers told the paper that gap violated federal Title IX law, which requires schools to provide male and female athletes equal access to playing opportunities and scholarship dollars.

The university told Jacoby the incorrect numbers were the result of a "clerical error" by a former employee they wouldn't name. The report showed it had been filed by a senior athletic department official who was recently promoted. The same day the story ran, FAU released a statement criticizing Jacoby for using "knowingly incorrect numbers" and shared "revised" numbers that, without explanation, raised the percentage of scholarship dollars to be in compliance with federal law. Jacoby said the paper requested emails between FAU officials to dig into the "clerical error" and new numbers. In mid-July, they were still waiting for the records.

 By **Tessa Weinberg**, *IRE & NICAR*

DECODING THE NDA

Nondisclosure agreements aren't anything new, but they've been in the spotlight recently for their prevalence in sexual harassment cases. Bill O'Reilly, Harvey Weinstein and Bill Cosby all used NDAs to keep settlements quiet. And so did **Donald Trump**.



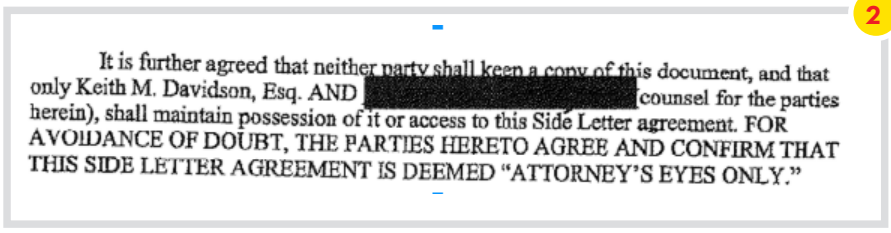
1

1.0 THE PARTIES

1.1 This Settlement Agreement and Mutual Release (hereinafter, this "Agreement") is made and deemed effective as of the 26 day of October, 2016, by and between "**EC, LLC**" and/or **DAVID DENNISON**, (DD), on the one part, and **PEGGY PETERSON**, (PP), on the other part. ("EC, LLC," "DD" and "PP" are pseudonyms whose true identity will be acknowledged in a Side Letter Agreement attached hereto as "EXHIBIT A") This Agreement is entered into with reference to the facts and circumstances contained in the following recitals.

We reached out to Wall Street Journal reporters Joe Palazzolo and Michael Rothfeld to learn more about how they discovered that Trump's lawyer arranged a $130,000 payment to a former adult-film star in exchange for her silence. Trump's relationship with Stephanie Clifford, known by her stage name Stormy Daniels, was long rumored, but Palazzolo and Rothfeld were the first to confirm the NDA's existence.

Note: All document excerpts were taken from a copy of a 2018 lawsuit filed by Clifford (bit.ly/TrumpNDA).



2

It is further agreed that neither party shall keep a copy of this document, and that only Keith M. Davidson, Esq. AND [redacted] counsel for the parties herein), shall maintain possession of it or access to this Side Letter agreement. FOR AVOIDANCE OF DOUBT, THE PARTIES HERETO AGREE AND CONFIRM THAT THIS SIDE LETTER AGREEMENT IS DEEMED "ATTORNEY'S EYES ONLY."

STEP 1

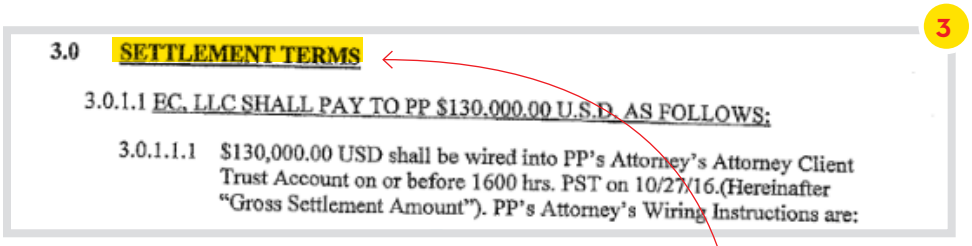
Confirm an NDA exists

Start by looking at who the document is silencing. Inevitably, the parties bound by the NDA will have told others about whatever it is the agreement is meant to keep secret. "Learn everything you can about this person who's subject to the NDA," Rothfeld said. Friends, family or associates won't have a legal obligation to keep quiet.

Once you identify sources, start making calls. Rothfeld suggests explaining that you're doing research and that you suspect they have information. If they're hesitant to talk, don't give up.

"You can certainly ask them, 'What is it that makes you feel uncomfortable? Can we talk through this?'" Rothfeld said. "You should always ask them for other people you can talk to so you can build your reporting outward."

If a source is concerned about their liability, leave the legal advice to lawyers.



3.0 SETTLEMENT TERMS

3.0.1.1 EC, LLC SHALL PAY TO PP $130,000.00 U.S.D. AS FOLLOWS:

3.0.1.1.1 $130,000.00 USD shall be wired into PP's Attorney's Attorney Client Trust Account on or before 1600 hrs. PST on 10/27/16.(Hereinafter "Gross Settlement Amount"). PP's Attorney's Wiring Instructions are:

3

STEP 2

Decode the document

1. Validate the authenticity

As with any document, you need to make sure it's real. The NDA Clifford signed involved three parties, not the standard two, and used pseudonyms to mask Clifford and Trump's identities. "Peggy Peterson" was Clifford's pseudonym while "David Dennison" was Trump's.

Brian Kabateck, a consumer attorney and managing partner of the Los Angeles law firm Kabateck Brown Kellner LLP, said pseudonyms aren't common in NDAs, but you might run into them if your reporting involves minors or sexual assault victims.

2. Source additional documents

A side letter agreement revealed the pseudonyms as Clifford and Trump. "The side letter is supposed to be kept separate from the actual contract, so that if it does get leaked by someone who has a copy of the contract, it would be harder for anybody to find out," Rothfeld said.

When it comes to reporting on secretive documents, anonymous sources are often part of the mix. "Even if you can't put your eyes on the document, you can get your sources to describe the document," Rothfeld said. "And then you can corroborate that information and you can keep going back to them."

You can also add pressure by explaining to sources why it's important for you to see the document in order to reach the internal level of verification your outlet may require.

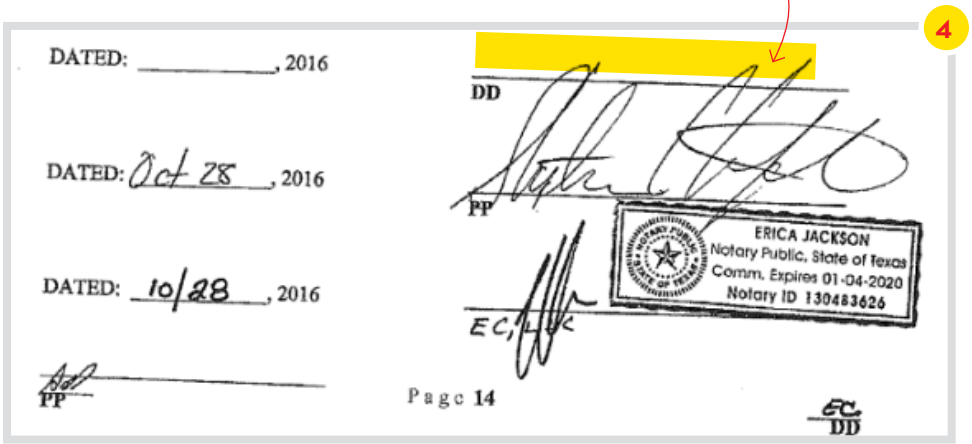
3. Identify the goods

You'll find the details of the NDA under "Settlement Terms." Trump's NDA stipulated that "PP," or Stephanie Clifford, would be paid $130,000 in exchange for her silence by Essential Consultants LLC. The document also outlined that Clifford had to turn over all documents related to Trump, must resolve disputes in private arbitration and would be fined $1 million for breaching the NDA.

4. Check if it's signed

When Rothfeld and Palazzolo approached Trump's lawyer Michael Cohen for comment, he denied Clifford's relationship with Trump, but never the NDA itself. And when the duo asked Clifford for comment, they received a forwarded statement from Cohen denying the relationship.

Trump has said he was not aware of the payment, and the document shows he never actually signed the NDA. Instead, the initials for Essential Consultants LLC appear, and the line for "David Dennison's" signature is left blank. ◆



DATED: _____, 2016

DATED: Oct 28, 2016

DATED: 10/28, 2016

PP

DD

PP

ERICA JACKSON
Notary Public, State of Texas
Comm. Expires 01-04-2020
Notary ID 130483626

EC, LLC

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EC
DD

4

Tips from an attorney

Put simply, an NDA is a contract between two or more parties not to do something or speak on a certain topic. An NDA is only binding to the parties that signed it, said Brian Kabateck, a consumer attorney and managing partner of the Los Angeles law firm Kabateck Brown Kellner LLP.

"I think the easiest first misconception would be that by receiving information that's subject to an NDA you are committing some kind of a breach or some kind of a violation," Kabateck said, "and you can't, because you're not a party in the contract."

Here are some do's and don'ts to keep you out of legal trouble:

Do ...

- Involve your editor and your outlet's legal counsel from the start.
- Be cautious when quoting legal documents or making interpretations as to what they mean.
- Consult experts to ensure your reporting is accurate, but be careful when sharing secret documents. Weigh the amount of outside knowledge you need to be educated against the risk of extra eyes.
- Know that NDAs can't prohibit someone from responding to authorities in the case of a subpoena or government inquiry, and they can't stop someone from reporting illegal conduct.

Don't ...

- Worry too much about your own liability as a journalist. "If someone's decided to breach an NDA, that's the decision they've made," Kabateck said. "It's not a matter for the journalist to be particularly concerned about. There's no civil liability or anything that attaches to the journalist."

Renee and Ron Merlino have lived in Pompton Lakes, New Jersey, for 34 years. Their home sits above a plume of contaminated groundwater and both have had cancer they blame on pollution from DuPont's former munitions facility.

CHRIS PEDOTA / THE RECORD

A six-month investigation fueled by 40 years of memos, emails and internal correspondence confirms a neighborhood hunch

DuPont's dirty secret

By **Scott Fallon** and **James M. O'Neill**
The Record, N.J.

For almost a century, DuPont produced enough explosives at its sprawling complex in Pompton Lakes, New Jersey, to help the U.S. win two world wars and provide thousands of well-paying jobs for generations of families.

But, over decades, DuPont simultaneously created a poisonous inheritance in the community by disposing of cancer-causing solvents into unlined lagoons where they leached into groundwater, migrated beneath 400 homes and vaporized through soil into basements. The Pompton Lakes neighborhood now has elevated levels of lymphoma and kidney cancer.

We launched our reporting efforts in mid-2017 to answer one question: Why did toxic groundwater remain under an entire neighborhood almost 30 years after DuPont signed an agreement with the state of New Jersey to clean it up?

Six months later, we published our findings in a four-part series called "Toxic Secrets."

It showed how DuPont worked since the 1980s to downplay the extent of contamination in the neighborhood, and then spent years refusing to test homes while residents were being exposed to toxic fumes. Why? We proved a long-held belief by many in town: DuPont feared the discovery of vapors in homes might aid a lawsuit brought by 500 current and former residents.

Pompton Lakes, New Jersey, with the DuPont facility in background.

DAVID BERGELAND/ THE RECORD

How we investigated

Using New Jersey's Open Public Records Act, we examined 40 years' worth of documents held by the state's Department of Environmental Protection. We read through 100 boxes containing key internal government memos and correspondence between DuPont and regulators — most of which had never been seen by residents.

It was clear from the scores of documents that DuPont engaged in a pattern of obfuscation from the very beginning. But we focused most of our attention on the years after 2001, when state regulators and the U.S. Environmental Protection Agency told DuPont to investigate whether residents were being exposed to vapors. It wasn't until 2008 that DuPont began testing and found high levels percolating under homes. Only then were residents notified.

What happened during those seven years?

Documents show DuPont maintained there was no threat even though the company was aware of the potential for the solvents to vaporize. DuPont pushed back time and again whenever regulators prodded them to test homes.

Those accounts were corroborated by hundreds of emails and other documents we obtained from the EPA using the federal Freedom of Information Act.

Among them was a September 2003 agency document summarizing a call between EPA officials and DuPont. It said DuPont had "adamantly opposed" conducting vapor samples in the neighborhood because "they are involved in several citizen suits and they are concerned that such an assessment could be detrimental to the cases."

DuPont didn't test homes until after it settled the lawsuit with 500 plaintiffs, the majority of whom signed a waiver prohibiting them from suing the company again.

Along with the document research, we spoke to regulators, elected officials and more than 50 current and former residents who shared with us their detailed medical histories.

Tips for following toxic trails

Case files aren't always complete. Once you've examined them and found holes in the narrative, write your records requests with surgical precision for the documents that may fill the gaps.

Get a scanning app for your smartphone. Almost all older government documents haven't been digitized and exist only on paper. It can be arduous scanning them yourself, but you'll save time in the long run by focusing on the documents that really matter.

Create an internal timeline. It's the easiest way to manage your documents, distill the information within and spot patterns.

Find a Rosetta stone. Most of these documents are chock-full of agency jargon. The EPA has a glossary on its website of hundreds of acronyms. Your state regulator may use some of the same terms. If stumped, ask a scientist.

Quantify the problem. Your state regulator will likely have a list of toxic substances and their safety standards when found in groundwater, air, etc. As science evolves, these standards often change, so make sure you're comparing apples to apples when looking at historical data.

Learn the health effects of pollutants. The Agency for Toxic Substances and Disease Registry has straightforward, up-to-date online descriptions of almost every toxic chemical and what it can do to humans. "ToxFAQs" can be accessed via the agency's homepage.

Former Pompton Lakes Mayor John Sinsimer looks toward DuPont's former munitions site. In 1988 he was credited with broadening an investigation of groundwater contamination on site to the adjacent neighborhood.

CHRIS PEDOTA / THE RECORD

Using a total of 16,000 words, more than a dozen videos and animated graphics, we produced a sweeping look at DuPont's duplicity, the plight of residents and the tepid response by regulators over the years. "Toxic Secrets" prompted newly installed Gov. Phil Murphy to order his attorney general to look into DuPont's handling of the site and his environmental commissioner to investigate whether cleanup efforts were sufficient.

How you can investigate

Investigating toxic sites is a universal topic that reporters anywhere can tackle. Like Pompton Lakes, there is a good chance that the real history has been kept secret in warehouses for decades. And the threat of vapor intrusion from contaminated groundwater is a growing problem across the nation as more environmental regulators are becoming aware of the danger.

When you begin, don't ask the EPA or your state environmental regulator for a particular set of documents. Ask them to provide you access to the entire case file for a contaminated site, which provides a thorough understanding of its history, especially how regulators dealt with polluters when crucial decisions were being made. Because the files are so voluminous, the vast majority of documents will likely not have redactions.

A few of the best documents:

Correspondence between regulators and polluters can be a gold mine. We found instances where New Jersey Department of Environmental Protection officials became frustrated with DuPont's tactics. One email from a case manager to DuPont: "If you are truly trying to protect human health, it should not have taken this long." At other times NJDEP seemed to coddle DuPont, like when it set ground rules about an upcoming meeting: "Listen as allies. (We're in this together and we get to both live by the decisions)."

Intra-agency correspondence often reveals case managers and scientists writing candidly about polluters and cleanup efforts (or the lack thereof). One document on Pompton Lakes had a case manager scrawl "Bull!" in pencil on the margins of a DuPont report asserting that pollution was not traveling offsite.

Engineering reports can show the history of the site, ownership transfers, geology of the region, which chemicals were used and up-to-date contamination levels versus samples taken in the past. One caution: these reports are often written by a contractor for the polluter and may not always be impartial. ◆

Scott Fallon and James M. O'Neill have covered the environment for The Record for 10 years. Fallon previously worked at The Philadelphia Inquirer. O'Neill worked for The Providence Journal, The Philadelphia Inquirer and The Dallas Morning News.

Read "Toxic Secrets" at bit.ly/dupont-secrets.

We collaborate with the news industry to build a stronger future for journalism through products, partnerships and programs.

Google News Initiative

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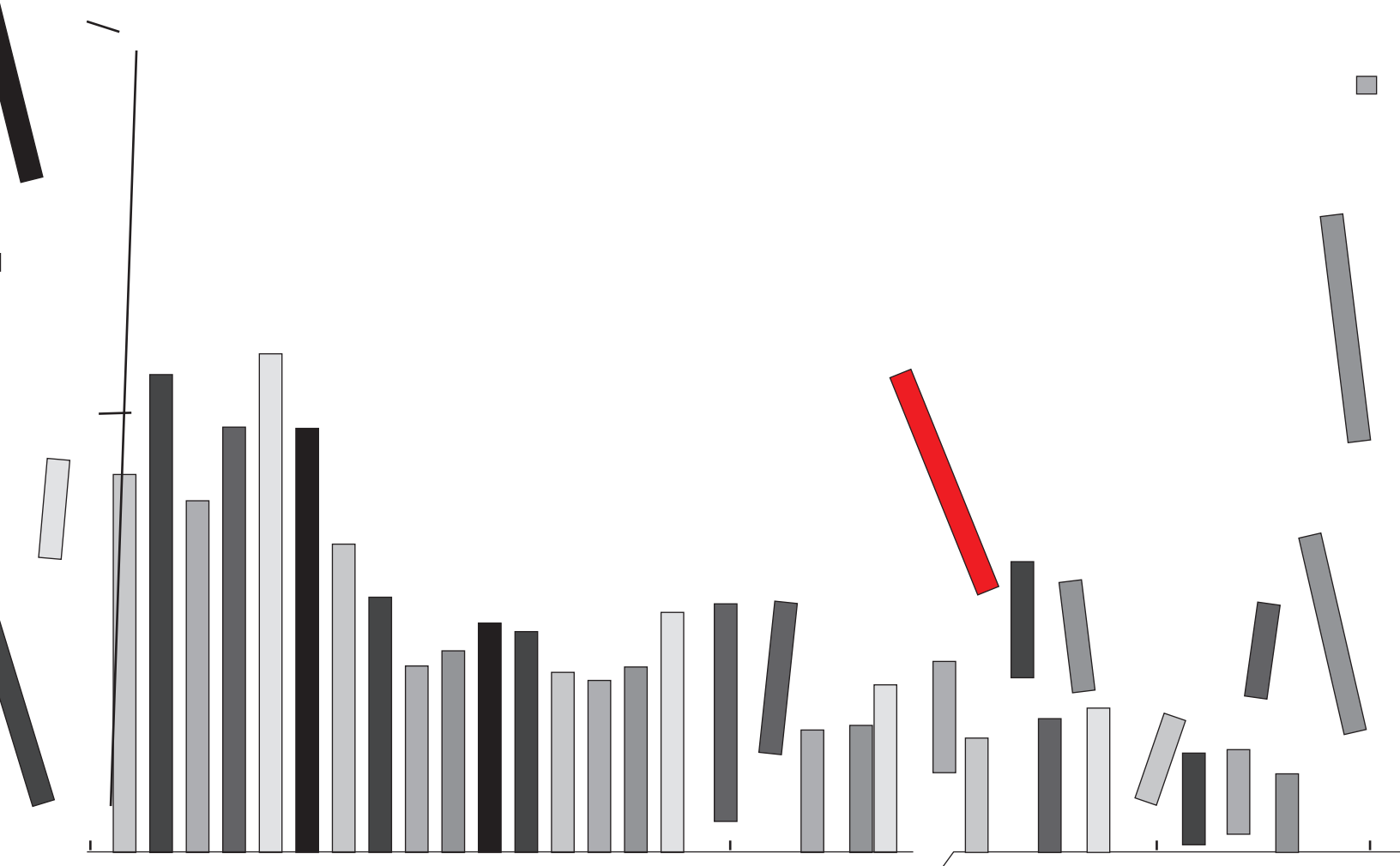
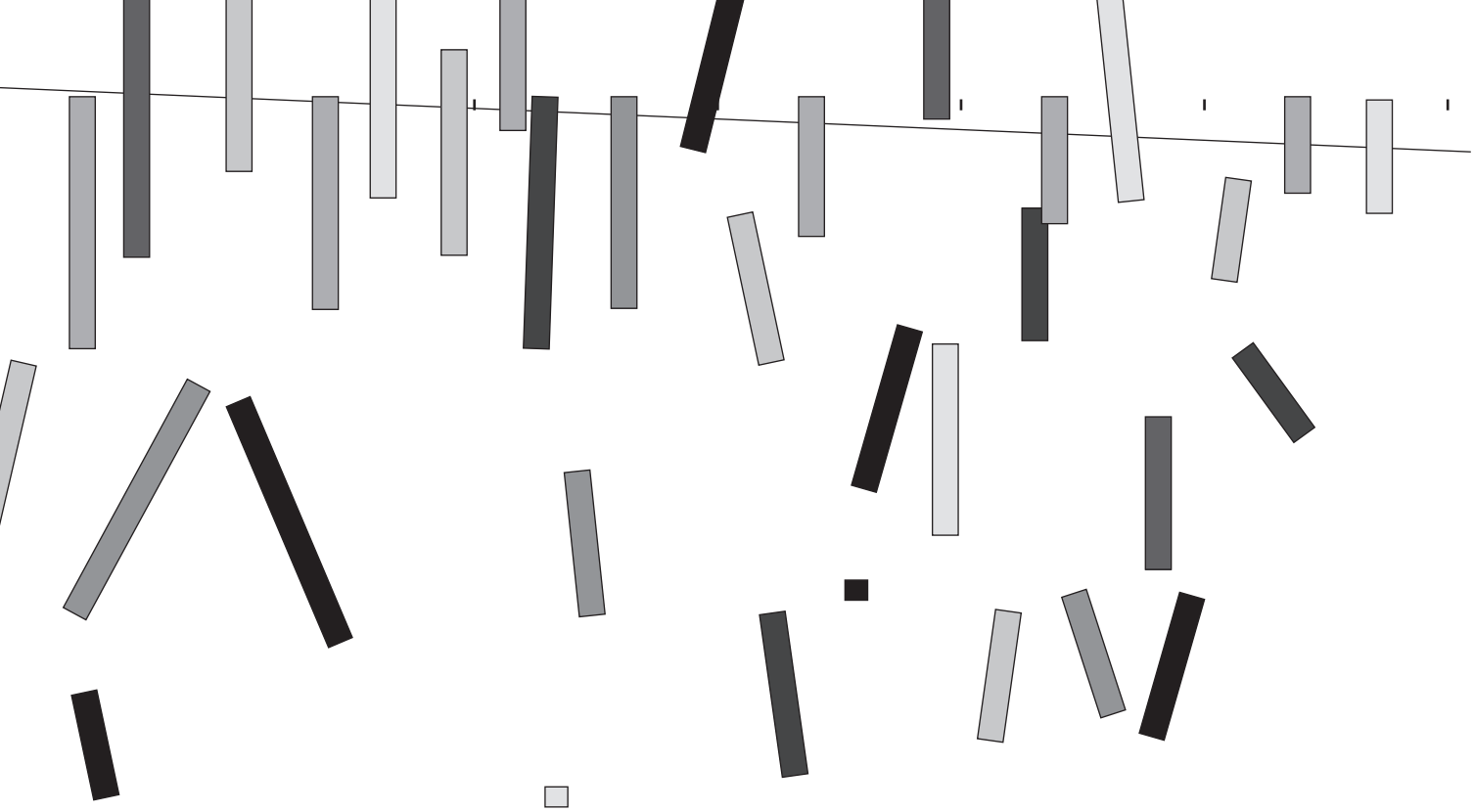
A beginner's guide to building effective maps, plots and charts

DECONSTRUCTING DATA VIZ

By **Simon Scarr**, Thomson Reuters



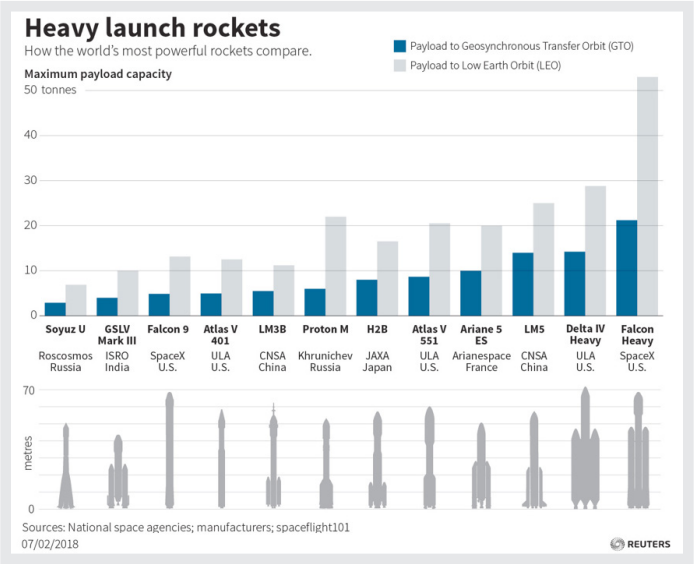


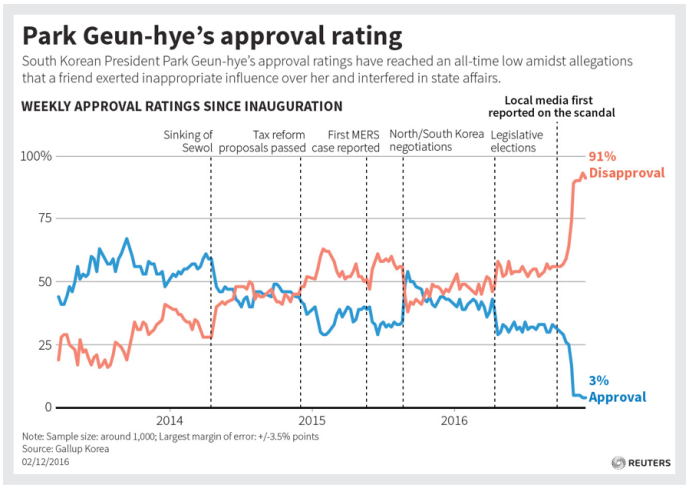
Whenever I teach a workshop, I ask participants to note three things about themselves using only visuals. After 10 minutes, some are still busy drawing elaborate scenes or perfecting complicated illustrations. But the truth is, it's a job that could be done clearly and concisely using simple icons.

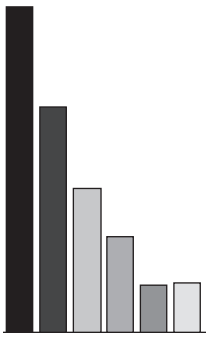
Clarity and readability are always key. We are conveying information, after all. If the reader doesn't immediately understand your graphic, you've fallen at the first hurdle.

Before diving in, think about your message. I always start by making a few notes to myself that address the information and message I want to convey. With a simple blueprint in hand, I won't stray from my original goal.

Here's some basic advice to help you combine data, design and narrative to add an invaluable dimension to your storytelling.







THE DATA

Good charts need good data; it's non-negotiable. No amount of fancy interaction or cutting-edge design can make a sub-standard data set compelling. The data must be clean, complete and, above all, well-sourced. Apply the same reporting and quality standards to your data as you would a written piece.

CHART TYPES

Now, it's time to chart. There are dozens, if not hundreds, of charting types, but I'll focus on some basic categories that most charts fall into.

Comparisons

Comparing values is one of the most common reasons to chart. Maybe you want to look at gross domestic product across countries or compare the year's top grossing movies.

Typically, you'll use a **bar chart** with each category represented by a bar, the length denoting value. This allows the reader to glance across bars and gather meaning from the contrast.

Bar charts must start at zero. Readers look at the length of bars to compare. If some of that bar is missing because of its starting point, it can skew your data and mislead the reader.

Another important and often overlooked aspect of bar charts is how they're sorted. If you want to emphasize value, sort them from lowest to highest. If they naturally fall into groups (like European and Asian countries), group bars together. Choose the sort that best conveys your point.

Time series

Sometimes we want to show change over time. Time series charts are most effective when there's an obvious change to observe. While bar charts are perfectly acceptable, as the number of categories being compared increases, it can be hard to derive meaning. This is where the **line chart** comes in.

Line charts are perfect for any continuing series, like time. Connecting the points together gives the reader a sense of continuity and allows them to better see how one group fares over time and compares to others.

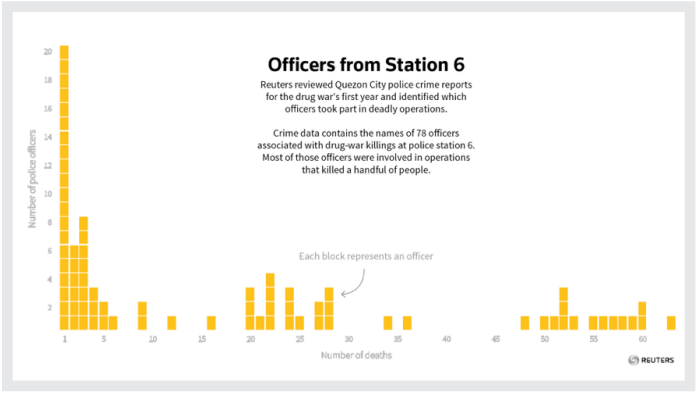
Composition

But what if our data isn't strictly showing disparate things? What if each category is a subset of a whole and our aim is to show the composition?

You clever readers out there have one delicious word in mind: Pie.

Pie charts show the whole as a circle divided into slices for each individual part. This can be useful, but it also has limitations. Single-slice pies are easy to understand, but with each additional slice it gets harder to gauge how much each wedge represents. When you have lots of wedges, a **stacked bar chart** can be a more legible option.

Stacked bars have another advantage over pies. Suppose you are looking at multiple categories. It's easier to see the difference between bars — which are right next to each other — rather than multiple pie charts that force the reader to look back and forth for meaning.



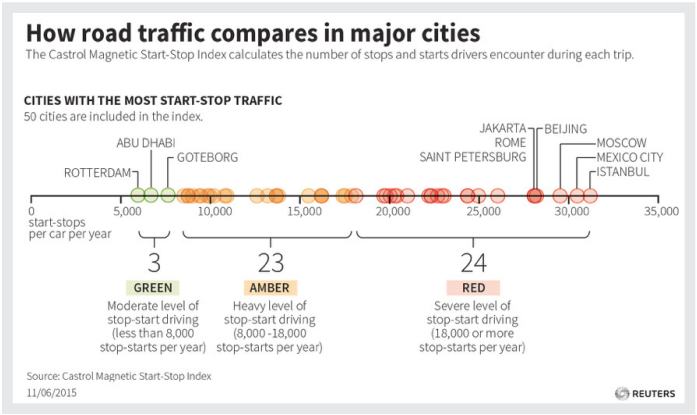
Good charts need good data; it's non-negotiable. No amount of fancy interaction or cutting-edge design can make a sub-standard data set compelling.

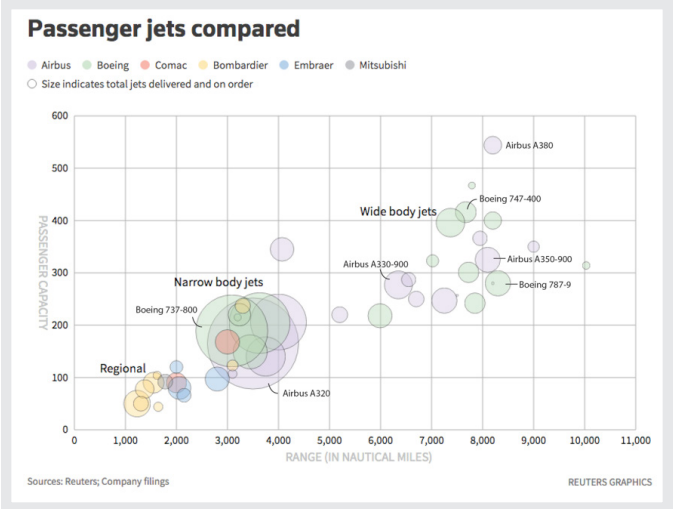
Distribution

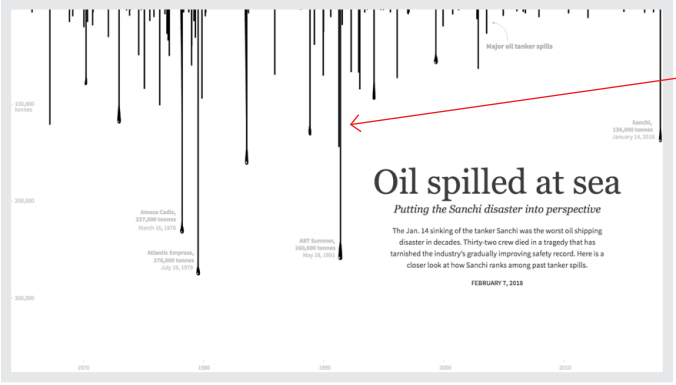
Sometimes the most interesting aspect of a data set is its spread, how points cluster, their ranges and obvious outliers. This is where the **dot plot** comes in. This chart type places a dot at each data point along a single axis. If your dots overlap, try adding transparency to the circles so you can see the density.

If you have a large data set, you can also arrange these points into stacked groups, called a **histogram**.

Dot plots are great for visualizing a single variable, but what if you want to look at multiple aspects of the data? You might want the dot plot's big brother: **the scatter plot**. These charts allow us to see a relationship between two variables. They can show trends and clusters in our data, and can highlight outliers. Incorporate a third or fourth variable by changing the size or color of the dots.







Geographical

Sometimes geographic distribution is important, and a map can help us interpret this information. To make a reliable map we need to use geographic information system (GIS) mapping software to ensure our data is displayed accurately. Don't attempt to hand-plot your points.

We can also show the geographical boundaries of our data using shapes and polygons.

But remember: Just because something happens in a place doesn't mean the location is important. For example, take a **choropleth map** of the world, which uses differences in color or shading of countries to visualize information. Because countries are different sizes, Russia often looks way more important than smaller countries. If you're visualizing or counting countries that fall into certain categories, a chart may be more effective.

Static or interactive?

Interactivity can be a powerful feature, but if used incorrectly, it can make your visualization harder to read. Interactivity should only be used when absolutely necessary to convey important information to the reader. A good rule of thumb is to assume a reader won't interact with the piece at all. Therefore, any information gained by hovering over an item or clicking on something is bonus material and not vital to your main goal. Remember, our aim is to make information easy to digest. Don't make the reader work for it.

However, there are compelling cases for interactivity. One recent trend I've noticed involves personal interaction with the reader. Ask them to answer questions or guess an outcome. You can collect this data and visualize the results.

Simon Scarr is Deputy Head of Graphics at Thomson Reuters, the world's largest multimedia news provider. Simon is responsible for directing information graphics and data visualization products, managing teams in Singapore and London, and working on a range of graphics from breaking news to investigative reports.

Interactivity should only be used when absolutely necessary to convey important information to the reader. Don't make the reader work for it.

DESIGN

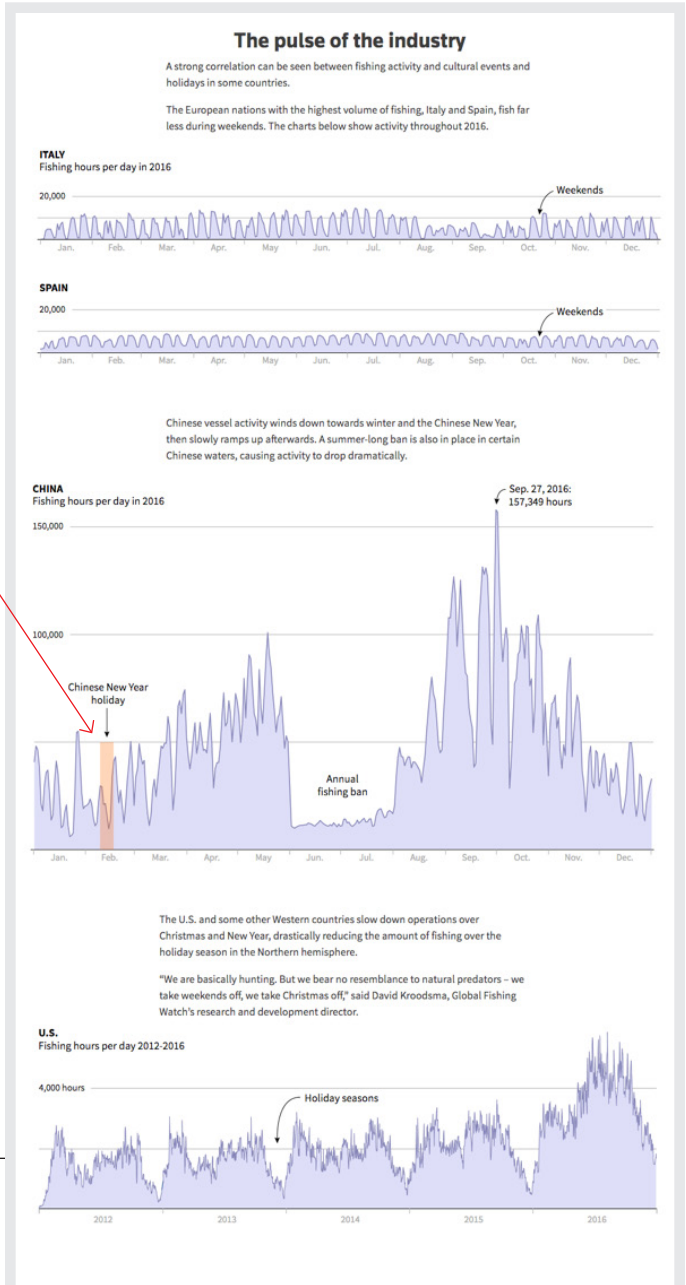
Now that you've picked a chart type, it's time to consider design. We must give readers all the help we can to guide them through a piece. Layout and color can go a long way here. Ensure your piece has an obvious beginning and natural flow. You can use element size and font weight to create a logical hierarchy.

Color should form a harmonious palette — elements shouldn't fight for a reader's attention. Contrast color or increase saturation to highlight certain parts of the graphic if necessary. Color can also be used to visually connect data. Add a key if you need to explain to readers what colors represent.

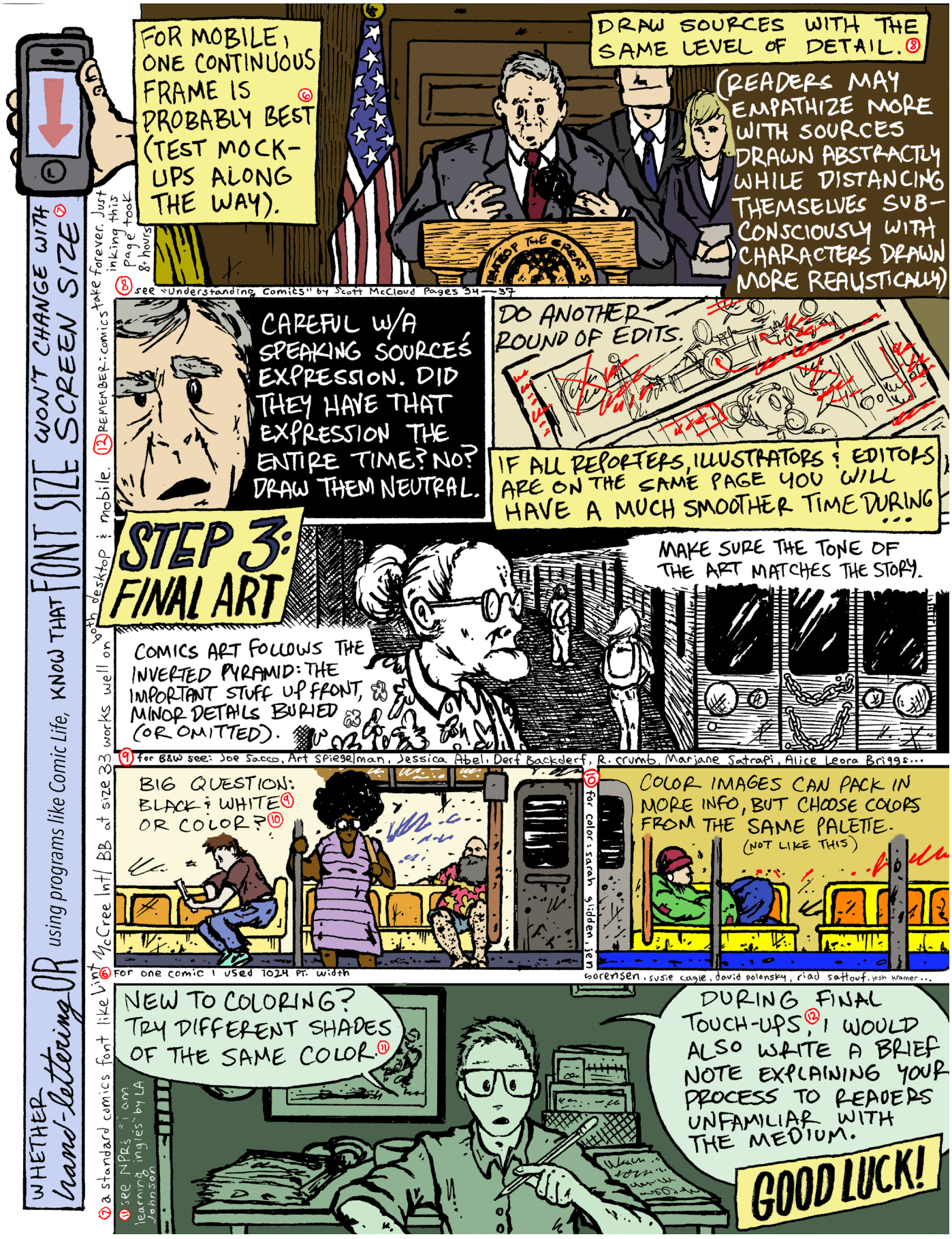
Avoid over-embellishment and unnecessary artwork. Keep additional design touches to a minimum so you don't distract the reader or make the chart harder to understand. You can still achieve a strong visual effect with simple, clean and smart touches.

Remember, the overall goal is to communicate a message. There's no harm in being direct. Guide the reader with annotations directly on the visualization or in an adjacent narrative. Don't forget to state sources and any caveats with the data, and make sure you give the chart a clear and interesting title and an introduction for context.

Before publishing, make sure your graphic has gone through a thorough fact check, preferably by someone else. And don't forget to gather feedback. Discuss your visualization with editors or other reporters. I also like to test a graphic on people who have no knowledge of the story or subject. If your visualization isn't working, don't be afraid to abandon it and start again. ◆




AN ILLUSTRATED GUIDE TO MAKING COMICS JOURNALISM
BY BLAKE NELSON
1) see "this is what i grew up of" by carrie ching
2) see the video "the price of gas" by sarah terry-cobo & arthur jones
3) see R. Kikuo Johnson's "how to hide $400 million"
CONGRATS! YOU HAVE A STORY WITH A) ANONYMOUS SOURCES, B) A DENSE BLOCK OF INFO IN NEED OF PIZAZZ, OR C) NARRATIVE MOMENTS LACKING OBVIOUS VISUALS
STEP 1: WRITING
WHEN REPORTING ASK VISUAL QUESTIONS
TAKE (AND REQUEST) REFERENCE PHOTOS.
87
DISCLAIMER: comics journalism is not a fundamentally new kind of journalism. The values/ethics are unchanged
IF YOU'RE MISSING A DETAIL YOU WANT TO SHOW, YOU'LL NEED TO OMIT THAT DETAIL, ABSTRACT IT, OR MAKE AN EDUCATED GUESS.
Whether or not you're creating illustrations or a full comic, it can help to write a traditional print article first
Then do a full copy edit. An editor will have a hard time changing your text later.
NOW YOU CAN ASK: WHAT CAN BE SHOWN INSTEAD OF SAID?
JUSTICE MARCELLUS WILLIAMS
SHOW ME $15
NARRATIVE MOMENTS ARE BEST.
The protestors walk up to the statehou
STEP 2: STORYBOARDING
PLOT OUT YOUR ACTION & PACING IN
REMEMBER: SPACE=TIME
extended pause vs. brief actions
& DECIDE EARLY w/ DESIGNERS, EDITORS WHAT SPACE YOU HAVE


WHETHER hand-lettering OR using programs like Comic Life, KNOW THAT FONT SIZE WON'T CHANGE WITH SCREEN SIZE ⑦
FOR MOBILE, ONE CONTINUOUS FRAME IS PROBABLY BEST ⑥ (TEST MOCK-UPS ALONG THE WAY).
DRAW SOURCES WITH THE SAME LEVEL OF DETAIL. ⑧
(READERS MAY EMPATHIZE MORE WITH SOURCES DRAWN ABSTRACTLY WHILE DISTANCING THEMSELVES SUB-CONSCIOUSLY WITH CHARACTERS DRAWN MORE REALISTICALLY)
⑧ see "Understanding Comics" by Scott McCloud Pages 34—37
⑫ REMEMBER: comics take forever. Just inking this page took 8+ hours
CAREFUL W/A SPEAKING SOURCE'S EXPRESSION. DID THEY HAVE THAT EXPRESSION THE ENTIRE TIME? NO? DRAW THEM NEUTRAL.
DO ANOTHER ROUND OF EDITS.
IF ALL REPORTERS, ILLUSTRATORS & EDITORS ARE ON THE SAME PAGE YOU WILL HAVE A MUCH SMOOTHER TIME DURING ...
STEP 3: FINAL ART
⑤ both desktop & mobile. works well on
MAKE SURE THE TONE OF THE ART MATCHES THE STORY.
COMICS ART FOLLOWS THE INVERTED PYRAMID: THE IMPORTANT STUFF UP FRONT, MINOR DETAILS BURIED (OR OMITTED).
⑨ for B&W see: Joe Sacco, Art Spiegelman, Jessica Abel, Dert Backderf, R. crumb, Marjane Satrapi, Alice Leora Briggs...
⑥ For one comic I used 1024 PT. width
⑥ Int'l BB at size 33
BIG QUESTION: BLACK & WHITE ⑨ OR COLOR? ⑩
⑩ for color: sarah glidden, jen sorensen, susie cagle, david polonsky, riad sattouf, josh kramer...
COLOR IMAGES CAN PACK IN MORE INFO, BUT CHOOSE COLORS FROM THE SAME PALETTE.
(NOT LIKE THIS)
⑦ a standard comics font like McCree
NEW TO COLORING? TRY DIFFERENT SHADES OF THE SAME COLOR. ⑪
⑪ see NPR's "I am learning Ingles" by LA Johnson
DURING FINAL TOUCH-UPS, ⑫ I WOULD ALSO WRITE A BRIEF NOTE EXPLAINING YOUR PROCESS TO READERS UNFAMILIAR WITH THE MEDIUM.
GOOD LUCK!

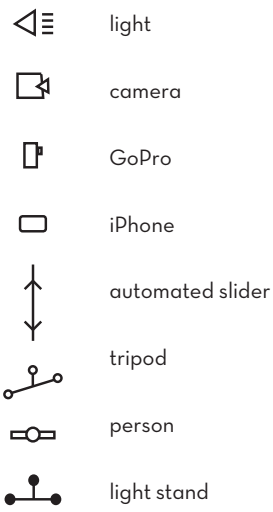
The Solo Artist

MMJs, MSJs, backpack journalists, one-man-band reporters — whatever you call them, they're going it alone.

By **Alexis Allison**, IRE & NICAR

It's not unusual for an I-team to have no, well, team. If you're the only investigative reporter at your station, even setting up a two-shot is no cakewalk. From deciding which equipment to pack, to where to place that third (or fourth!) camera, we've got you covered. We asked journalists who do their own camerawork about best practices when it comes to gear, lighting and setup — and why it might be better to DIY.

Key



The Brendan Keefe

Requires: 4 cameras, 4 lights

Brendan Keefe chose to do his own camerawork 10 years ago. He uses four or five small cameras to snag his best shots and make his interviewees feel at ease. An added perk: All of his equipment fits in a case he carries with one hand. "What I've tried to do is flip the paradigm. Instead of (working alone) is something I have to do, this is something I get to do. The big thing for me is the freedom that this workflow offers."

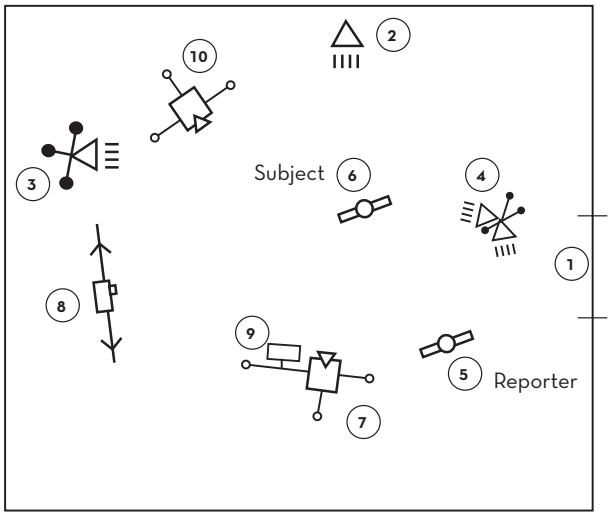
THE GUIDE

Use available lights, like windows **(1)**, as much as possible. "I will use a window as my key light and I'll use my other lights for fill."

In this setup, Keefe uses a backlight clamped to a frame or shelf **(2)**, a fill light on a stand **(3)**, two key lights **(4)** — one pointed at the subject; the other aimed at the reporter **(5)** — and a window.

The smaller the camera, the more relaxed your source **(6)**. The f/1.4, 50-mm prime lens provides great focus and soft, cinematic backgrounds **(7)**. Shoot in 4K. That way, you can crop down your medium shot and get a tight shot.

Keefe also likes a GoPro on an automated slider **(8)** and an iPhone **(9)**. In this setup, he uses a reversal camera — a Sony X70 Camcorder on a tripod **(10)**.



The lack of cameramen allows the interview to become a conversation, not a production.

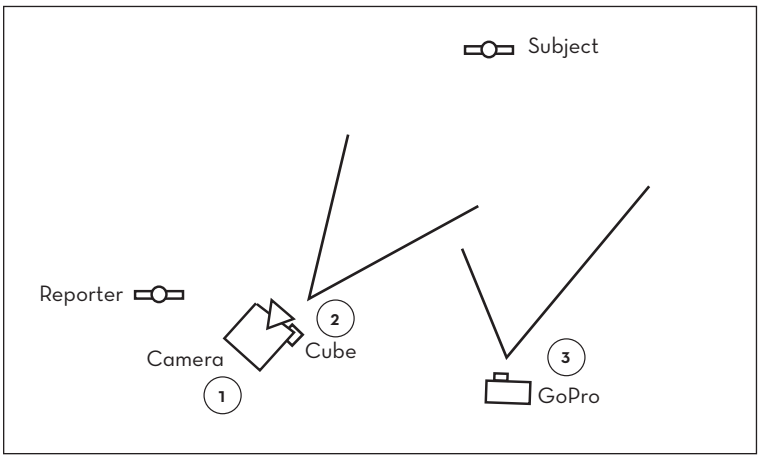
In the editing stage, use Final Cut Pro 10 to sync multiple cameras.

Whatever you use, hone your craft. "There is a mistake in believing that these tools run themselves," he said. "There is no replacement for skill, talent and experience. No tool is going to replace that."

The Triple Threat

Requires: 3 cameras

Taeler De Haes, an investigative reporter who recently joined WEWS/ABC 5 in Cleveland, regularly reports with two (sometimes three) cameras. She's got a digital-first philosophy and makes sure her work always offers a public service: "The very first thing I always think of — how can I make the viewer smarter? There's always a creative way to tell a story."



THE GUIDE

When De Haes worked at a TEGNA station, the MSJs had kits that included a Sony XD camera **(1)**, a Cube camera **(2)**, a GoPro **(3)** and a gimbal, which is a stabilizer for your camera. "My goal is to use two different camera angles a day," she said.

The Cube **(2)** is a one-inch camera the size of a keychain. "It is a really good tool for undercover reporting," De Haes said. Pop it on the front of your main camera, or any other magnetic surface. Then, download the Cube mobile app to watch the action from your phone.

Don't underestimate the power of your phone. "These iPhones and Androids get video that's impeccable," De Haes said. Mobile video is great for shooting teasers in the field, or any time De Haes doesn't have time to get back to her computer.

Your Mobile Journalism Shopping List

Judd Slivka, assistant professor of convergence journalism at the University of Missouri, shared his go-to gear when it comes to mobile journalism. The tools on this list compose his "basic advanced kit."

"It doesn't have to be high art," Slivka said. "Most of the time it's not. Because most of the time, if we're producing something on our mobile phone, we're either producing it for the economic reason — we don't have other gear — or we're doing it for a temporal reason, which is that we need to get it out now."

The Basic Advanced Kit

Total cost: $560 to $715, depending on gear

- ☐ **ShoulderPod S1 Professional Smartphone Rig** ($30) *For stability and framing.*
- ☐ **Vello CB-510 Dual Shoe Bracket** ($15) *For mounting accessories, this bracket fits into a briefcase and works with the ShoulderPod S1.*
- ☐ **Taousa Universal Led Fill-in Light Clip-On Portable Mini Pocket Spotlight** ($16) *For fill light.*
- ☐ **Rode VMPR VideoMic Pro R with Rycote Lyre Shockmount** ($215) *A microphone worth the splurge – perfect for natural sound, clean ambient sound and interviews.*
- ☐ **Manfrotto MTPIXI-B PIXI Mini Tripod** ($28) *Excellent for interviews, sturdy and able to be used as a hand mount for the camera if you're on the move.*
- ☐ **Zeiss ExoLens series** ($150 total, multiple products sold separately) *A set of wide-angle, macro and telephoto lenses.*
- ☐ **Shure MVL Omnidirectional Condenser Lavalier Microphone** ($69) *The go-to microphone for interviews.*
- ☐ **IK Multimedia iRigPre** ($40) *This amplifying device connects your microphone to your smartphone so you can capture high-quality sound on mobile.*
- ☐ **Rode i-XLR** ($149) *Similar to the iRigPre, this device connects your microphone to your smartphone and is best for gathering audio when the image isn't as important.*

Indiana failed to test, clean or condemn nearly 3,000 former meth labs. Then families moved in.

Cleaning House

By **Bob Segall**, WTHR-TV Indianapolis

No one wants to be the bearer of bad news. But there I was, knocking on doors across Indiana to deliver a disturbing message: "You and your kids are living in a house that's a former meth lab. It's never been cleaned up. And according to state law, you're not supposed to be living here."

It's a conversation I had with unsuspecting families over and over again as photojournalist Bill Ditton and I visited more than 400 contaminated homes during a four-month investigation that took homeowners and state officials by surprise.

Finding the toxic homes was surprisingly easy. Figuring out how local and state officials had so badly dropped the ball was far more challenging. And what WTHR found in Indiana raises questions about how other states have addressed (or not addressed) countless homes contaminated during the nation's meth epidemic.

The meth epidemic hits home

Methamphetamine started to explode as a street drug in the U.S. in the 1990s. While most meth hitting American streets today is shipped in from other countries, it used to be a local commodity cooked in kitchens and basements with a homemade concoction of over-the-counter pharmaceuticals and easy-to-access household chemicals.

That process leaves behind toxic residue that sticks to everything: walls, furniture, carpeting, clothing, toys and anything else inside a home. These dangerous residues can lead to a long list of serious health problems. That's why cleanup crews are required to wear full hazmat gear when they enter a meth house, and it explains why states like Indiana started passing laws to help ensure residents do not live in toxic meth homes until they are properly cleaned.

Indiana's law took effect in 2005. Since then, the Indiana State Police have busted more than 13,000 meth labs and listed them in an online registry. If a property appears on the registry, ISP identified it as a confirmed meth lab and the local health department is required to designate the home as uninhabitable until it's cleaned and tested to ensure it no longer presents a health hazard.

When WTHR's 13 Investigates team got a tip that families in southern Indiana were living in houses listed on the state's toxic home registry, we wondered how that was possible. I met with families who explained they discovered by accident that they unknowingly purchased a former meth lab that was never cleaned. They and their young children had started experiencing health problems, such as respiratory disease, headaches, chronic fatigue and rashes — all consistent with exposure to toxic meth residue.

An environmental health inspector places a large sticker on the window of a Muncie, Indiana, meth house.

WTHR

Building a new database

Back in the newsroom, I created a database of every property listed on the state toxic home registry and determined where police found meth on each property. (The database showed whether the meth-making activity was in the kitchen, bathroom, garage, backyard, etc.). I narrowed the list to actual homes — not cars, boats or motorhomes, which also appear in the state database — where police found signs of an active meth lab inside. Then I sorted the properties by county and hit the road again to visit as many former meth labs as possible.

Bill and I soon discovered the state's data was deeply flawed. Contaminated homes that were a danger to the public were lumped in with parking lots and fields where there were only rudimentary signs of meth ingredients, posing little risk to public health. Some addresses turned up empty lots where a contaminated home was razed years earlier, but no one removed the property from the database. But most of the addresses we visited were actual homes or apartment buildings and, sure enough, many were inhabited.

Residents told us they moved in without receiving a warning and were surprised when we showed them the ISP meth lab report that detailed what investigators found inside. Most of these reports were accessible online and included the actual police report as an attachment. While Bill and I spent weeks visiting homes and talking with families, WTHR producers Susan Batt and Cyndee Hebert spent countless hours correcting state data and refining our own toxic homes database.

Next, we visited local health departments to ask why they had not condemned the properties until they were tested and cleaned — as required by law. Many of the health inspectors were candid, admitting they were unfamiliar with the state law. And they told me even if they had known about it, they didn't have time to enforce the law.

"I simply have too many other things to do," one of the inspectors acknowledged. During our interview, another inspector challenged state officials who oversee the statewide cleanup program to "get off their rear" and provide local

The investigation also triggered an emergency meeting at the governor's office and prompted widespread changes.

Reporter Bob Segall and photojournalist Bill Ditton visited more than 400 contaminated homes over four months. WTHR

health departments help in enforcing the regulations. Indiana State Police expressed shock and disappointment to learn local and state health departments were allowing unsuspecting families to move into contaminated meth homes officials raided months earlier.

We eventually came to the following conclusions:

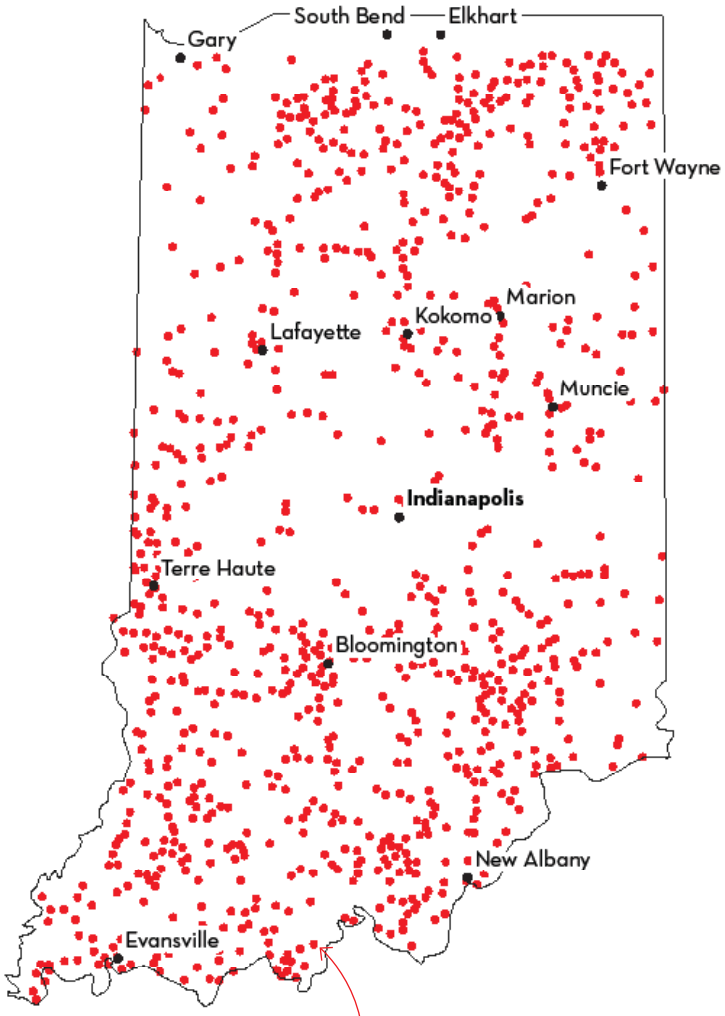
- Local and state health departments failed to test, clean or condemn nearly 3,000 contaminated homes, allowing families to live inside in violation of state law.
- Families across Indiana developed chronic health problems from years of living inside former meth labs that were not properly tested or cleaned.
- Lawmakers and state leaders who passed legislation to address the problem had no idea the solution they developed was not working due to a lack of enforcement.
- Many local health departments across the state lack the staffing, funding and education needed to properly enforce the state's toxic home cleanup program.
- The state's online registry of toxic homes was full of errors, providing local health departments and homeowners with incorrect information about the safety status of thousands of Indiana homes.

As part of our reporting, we transformed our refined data into a searchable online database. It allowed viewers to find uncleaned meth houses in their neighborhoods and linked to police reports showing exactly what investigators found. Unlike the state's neglected online database, WTHR's searchable data included updated and corrected information gleaned from months of investigation and analysis.

Results and replication

What started as bad news for thousands of Indiana families yielded very positive results. After our report, health departments started notifying families they were living in former meth houses and informing them they had to have the homes test-

Bob Segall is senior investigative reporter at WTHR-TV in Indianapolis. His "3,000 Toxic Homes" investigation triggered a new state law and was a 2017 IRE Awards finalist.



An analysis of state records found **nearly 3,000 Indiana meth houses** have no cleanup certificate filed with the Indiana State Department of Environmental Management.

ed (and, if necessary, cleaned) or risk being condemned. Other families moved and began to feel better soon after leaving the toxic environment.

The investigation also triggered an emergency meeting at the governor's office and prompted widespread changes. Local health departments initiated testing and/or remediation of contaminated homes and removed thousands of properties from the state's toxic home registry. The governor ordered a massive shakeup in state agencies that oversee Indiana's broken cleanup program. The state legislature also passed a law to formally reorganize the toxic home cleanup program and to give health inspectors new tools and resources to enforce the state's cleanup laws.

So, how has your state handled contaminated meth homes?

Most states that seriously tackled the methamphetamine epidemic now have an agency that oversees the enforcement and response, and a program designed to keep contaminated homes vacant until they are cleaned. Many states also maintain a list or registry of all known properties where authorities made a meth bust, as well as a list of properties that were tested and/or cleaned. (In Indiana, those were two separate lists maintained by two separate agencies.) Getting those lists will give you a starting point to investigate several important angles:

1. Are the lists accurate or does the state not maintain up-to-date information? If the information is outdated, is the enforcement outdated and neglected, too?

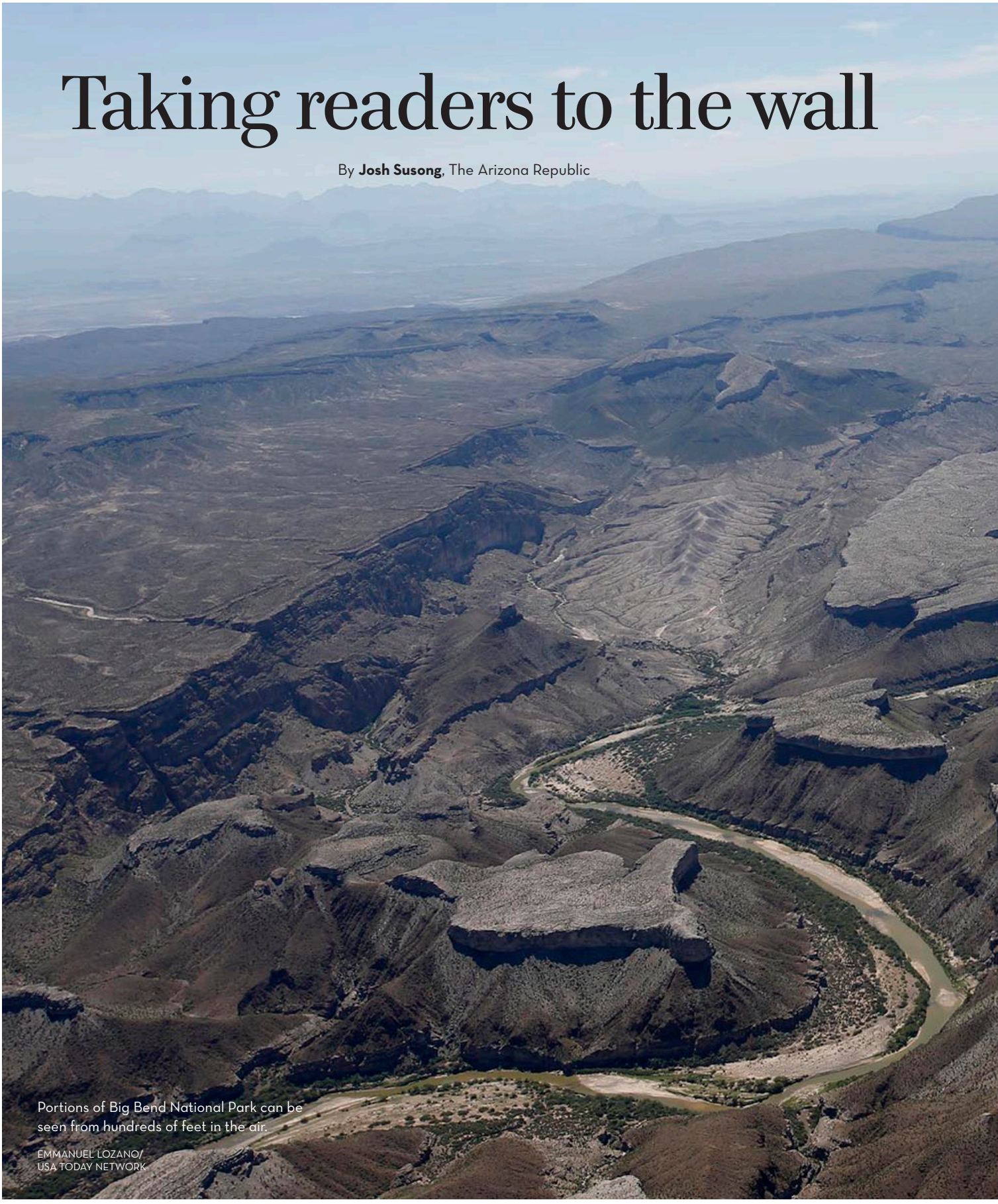
2. Have state or local health departments followed up to ensure contaminated properties are adequately addressed after they are identified?

3. What laws, if any, exist in your state to help ensure families are not living in properties contaminated by meth and who is responsible for enforcing those laws?

Visiting homes on the registries, speaking with homeowners and requesting remediation reports from local and state agencies will help you determine if cleanup programs are working as intended. If you find your state does not have a registry or central clearinghouse to monitor and track former meth labs, that might suggest poor oversight, which may lead to a compelling story as well. ◆

Taking readers to the wall

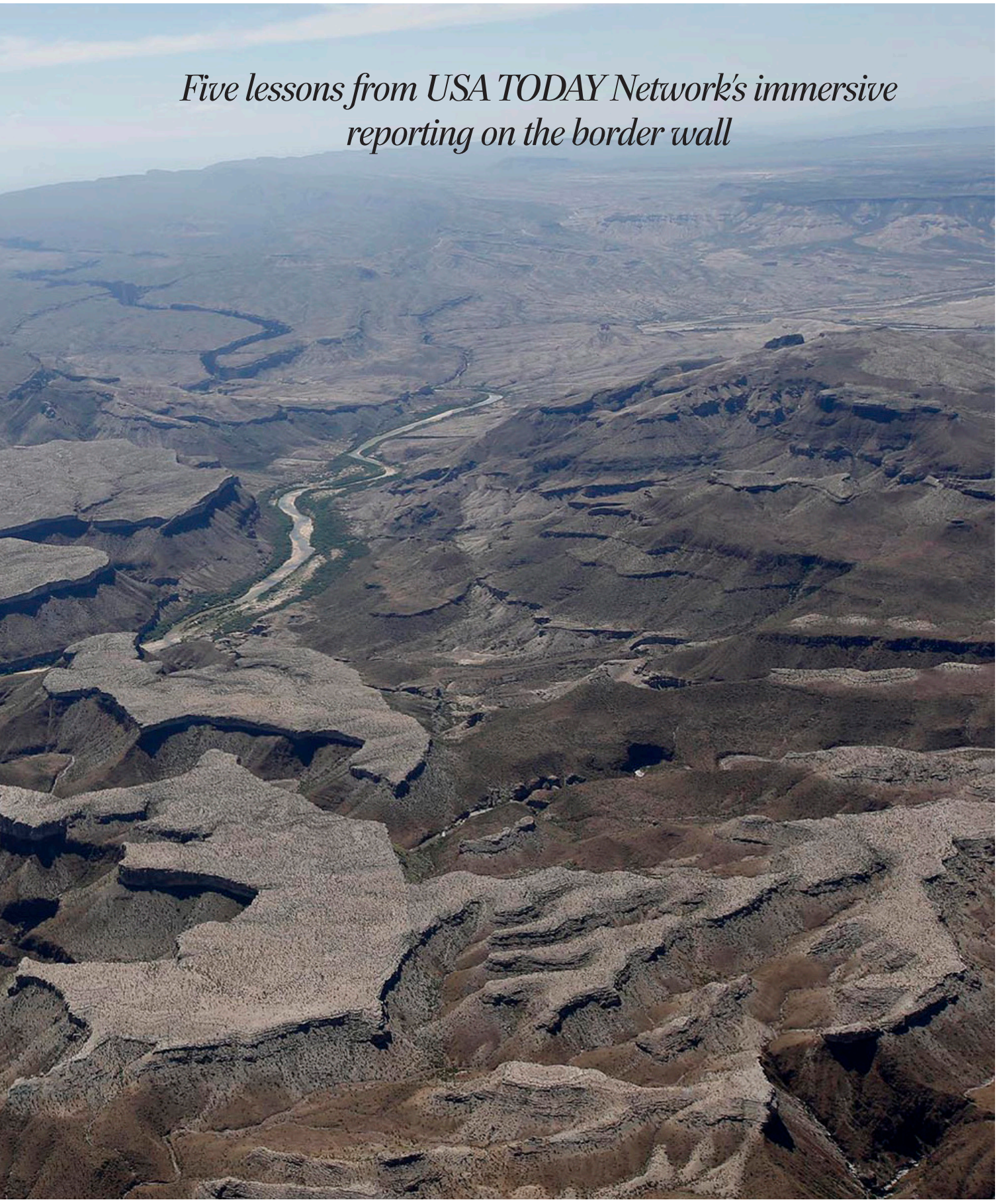
By **Josh Susong**, The Arizona Republic



Portions of Big Bend National Park can be seen from hundreds of feet in the air.

EMMANUEL LOZANO/
USA TODAY NETWORK

Five lessons from USA TODAY Network's immersive reporting on the border wall



As we awaited the inauguration of a new president in January 2017, our editor, Nicole Carroll, had a big request: Explain everything about the border wall to readers.

Everybody already knew about Donald Trump's idea for "the wall," of course. In Arizona, the border is almost our backyard, and we had been reporting on it in various ways for a long time. But covering the wall would be anything but easy.

First of all, the wall didn't exist. As reporter Dennis Wagner would later write:

Early on, Trump indicated he wanted full replacement. In a February press conference, he declared: "We are going to have a wall that works, not going to have a wall like they have now, which is either non-existent or a joke." … Trump's wall does not yet exist. Yet it looms over the border as an undefined idea.

So, how do we cover something that doesn't yet exist, in a space than spans 2,000 miles?

Here are five strategies we used.

1. Think big

A lot of people had examined border fencing and security, including excellent research from the University of Texas, The Center for Investigative Reporting and others. We wanted to capture the entirety of the border to show the enormous task of walling it off, and we wanted to do so in a new way, not through existing satellite images. We wanted to see every foot of it ourselves.

This was actually a pretty unthinkable challenge. You can imagine some of the early conversations. Can we hike it? Go on horseback? Ride ATVs? Every idea required a reality check. It's 2,000 miles, including immense deserts, a huge river, a sovereign tribal nation and a bombing range. Seeing it from the air would be the only way unless we spent years on the ground.

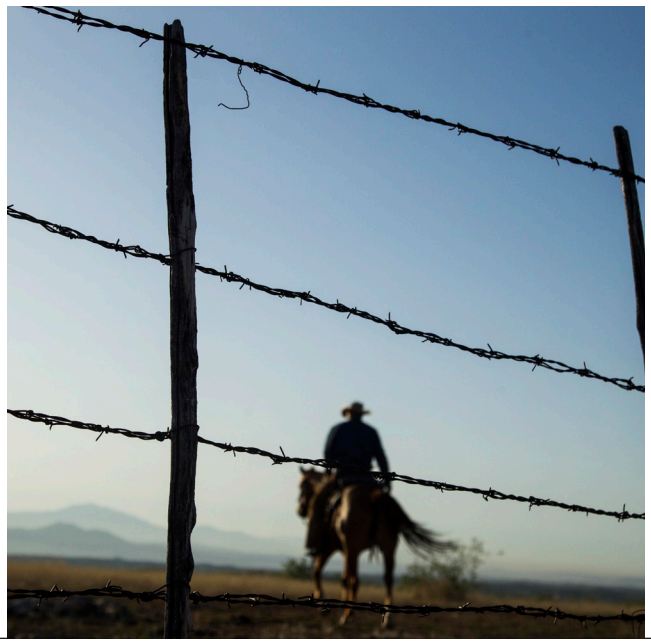
Because we had the support of the entire USA

The remains of an undocumented border crosser at the Pima County Office of the Medical Examiner.

MICHAEL CHOW/ USA TODAY NETWORK

Scores of reporters, photographers, editors and digital developers spent nine months working on "The Wall."

EMMANUEL LOZANO/ USA TODAY NETWORK



Reed Thwaits herds cattle at Atascosa Ranch in Arizona.

NICK OZA/ USA TODAY NETWORK

USA TODAY Network reporter Dennis Wagner over the Rio Grande in Texas.

EMMANUEL LOZANO/ USA TODAY NETWORK

Kathy Kieliszewski and David Wallace of the USA TODAY Network at Atascosa Ranch in southern Arizona.

EMMANUEL LOZANO/ USA TODAY NETWORK

Selene Ramirez (seated). Her brother Carlos Martinez died in the desert of Organ Pipe Cactus National Monument in Arizona.

NICK OZA/ USA TODAY NETWORK

TODAY Network, the helicopter flight became a reality. That flight included high-definition video and some high-tech imaging systems. It also required some old-school all-nighters as multimedia editor Emmanuel Lozano, who planned the flight, worked to get a lot of different media exported each day so he could be ready to fly again.

2. Get data

We wanted the project to play many roles. It would be fundamentally explanatory (our lede would invite readers to "learn, discuss, debate and decide"). It would tell great stories. And it would tackle the big questions with an investigative approach: Could a wall be built? Would it work? What would the consequences be?

From the start, we wanted to look more closely at the idea that a wall would have to be built *somewhere*. It's one thing to demand one. It's another thing to actually dig up a piece of earth and build one. And in Texas, where most property is privately owned rather than federally controlled, this has always been a big question.

A lot of reporting had been done about taking property for border fencing under the Secure Fence Act. We wanted to look forward. How much more property would be taken to build a wall? Reporters Kirsten Crow and Rob O'Dell worked on this question. It took months to pry property records out of more than a dozen counties, but our GIS-driven analysis showed the number of properties could be 5,000.

Rob also worked with reporter Jill Castellano to tally the number of border-crossers who die in the process. Federal authorities undercount and underreport the number, so we spent most of a year fighting to unearth local data to find the true toll. We know we still haven't found every case, but what we did find showed some stretches of border had nearly 300 percent more migrant deaths over five years than what is federally reported.

3. Get out there

The stories, as they say, aren't in the newsroom. Perhaps the single most effective thing we did was to rally reporters from every spot along the border. They knew their areas and set out to find the characters we knew would have complex, contrasting and controversial points of view.

What we couldn't know was just how dramatic that process would become.

Reporters Daniel Gonzalez and Gustavo Solis sat down — after some very tense negotiation — with a human smuggler. Daniel and our photo team of David Wallace and Nick Oza met an activ-

More than 30 reporters and photographers interviewed migrants, farmers, families, tribal members — even a human smuggler.

Rancher John Ladd leans on his truck on his ranch, which borders Mexico. The 16,000-acre calf/cow operation has been in the Ladd family for 121 years.

MICHAEL CHOW/USA TODAY NETWORK

ist who knew a woman looking for her brother, a border-crosser, who had been lost in the desert. They ended up going on a dramatic desert search with her in 110-degree heat. They didn't find her brother's body that day. But months later, when his remains were found, the woman called Daniel, and he spent more than 24 hours with her and her family as they crisscrossed rural Mexico in the middle of the night to bring him home.

Lots of other things happened simply by being there. Border agents who only planned to give us a standard tour ended up taking us on an ocean patrol. An incidental visit to a migrant shelter revealed a whole new story of how young men were hiding in a cemetery after being kidnapped by border bandits. A reporter on tribal land, where most media had been turned away, happened to be waved through a tribe-only gate and into the world of tribe members who live on the other side of the line.

Because we were there, so much of this happened on video in ways it might never have before. There's still no replacement for dropping what you're doing, getting in the car and going to see it for yourself.

Josh Susong is senior news director at The Arizona Republic and was the lead content editor for "The Wall," which won the Pulitzer Prize for explanatory reporting in 2018.

4. Get in there

We built this project in virtual reality for the Vive VR headset, a technology so new that most of us had never used or even seen it before.

We gathered all kinds of material: Hundreds of hours of video, thousands of lines of code for position data, and natural sound and mapping information. But it wasn't until I put on the headset for the first time that I actually understood what we could make.

VR wasn't just a platform to display content. It was a journey where everything we reported could become something new. We built out a new version of the project just for this platform. But the same can be said for everything we did — the 15 videos, the podcast series, the documentary. Each piece became its own unique story because we got inside the platform and understood it.

My epiphany: If you're a content creator or a word editor working with a technology person, go live inside that technology as early as you can. Your work will be better for it.

5. Explain it all — fast

We published more than 40,000 words of copy, more than an hour and a half of video content, and hours and hours of audio (*thewall.usatoday.com*). But there's no way one person consumed it all in one shot. So, we had to convey that this work was about reporting, but with a human purpose. We revised and rewrote, edited and debated, and it all came down to this:

We flew the entire border, drove it too. More than 30 reporters and photographers interviewed migrants, farmers, families, tribal members — even a human smuggler. We joined Border Patrol agents on the ground, in a tunnel, at sea. We patrolled with vigilantes, walked the line with ranchers. We scoured government maps, fought for property records.

In this report, you can watch aerial video of every foot of the border, explore every piece of fence, even stand at the border in virtual reality. Still, breakthrough technology would mean nothing if it didn't help us better understand the issues — and one another. ◆

The transparent TV studio

How a clear studio on wheels is bringing transparency to broadcast news

By **Jeremy Jojola**, 9NEWS

Our experiment with a transparent television studio on wheels has proven to be captivating, engaging and sometimes controversial.

The idea behind our series "Let's be Clear" is pretty simple: get fascinating people inside our clear TV studio and interview them at interesting locations — all live on Facebook — while posing viewer questions submitted in real-time.

Our goal is to bring transparency to television news by allowing raw moments to unfold live with viewer questions.

The idea was born out of a TEGNA innovation summit where we brainstormed ways to get viewers involved in live news interviews. After summit attendees expressed support for the concept, TEGNA managers approved a budget for Denver's 9NEWS to get "Let's be Clear" on the road. We rented the truck, outfitted it with furniture and a camera crew, and produced two pilots which were tested before thousands of people as part of TEGNA's research program.

While the concept sounds easy, trying to convince people to sit inside a weird-looking studio to answer internet questions was challenging. There were times people backed out of interviews the moment they saw our strange-looking cube roll up. The fear of internet trolls infiltrating interviews discouraged others. (We do weed out questions that contain offensive words or inflammatory terms.)

A clear TV studio on wheels allows journalists to ask viewer questions live on Facebook.

9NEWS

Jeremy Jojola is an investigative reporter at 9NEWS in Denver.

On the technical side, we sometimes struggled with getting strong internet in remote locations. This was important for monitoring viewer questions and producing a quality livestream.

Somehow, even in 90-degree weather (the truck didn't have air conditioning), we managed to pull off some interesting and highly engaging interviews.

Our first interview took place in January 2017 with a former Scientologist and, since then, we've convinced others to enter our transparent cube, including a person who had been addicted to heroin and the general manager of an iconic Denver restaurant.

Even Colorado Gov. John Hickenlooper found the concept interesting enough to give it a shot, and we interviewed him in front of the State Capitol building.

During the interview with Hickenlooper, viewers drove the conversation. They asked about his stance on the death penalty, the potential for Amazon to locate its second headquarters in Denver and his future political plans. We read these questions in real time and got some interesting answers from the governor.

As an investigative journalist, I added my own follow-up questions. At one point, I felt it was necessary to push the governor to clarify his decision to delay the execution of a man on Colorado's death row.

The most engaging and most-watched interviews occurred with people who held controversial beliefs. We received a lot of flak from viewers for interviewing "flat-earthers," people who reject basic science and believe the Earth is flat. Still, I believe our flat-earther interview exposed how even the most absurd conspiracy theories still thrive and grow thanks to social media groups and echo chambers.

While we're still adapting "Let's be Clear" to address viewer feedback, I believe it's given viewers an interesting way to interact with journalists and newsmakers. Bringing in viewer questions as part of the news gathering process strengthens trust and lets people know their thoughts and questions matter.

Since "Let's be Clear" proved successful in Denver, TEGNA decided to invest more money in the concept by testing it at another company station, KSDK-TV in St. Louis. The station shot several live interviews, and I've been told by my colleagues that viewers are responding to the idea in that market. ◆

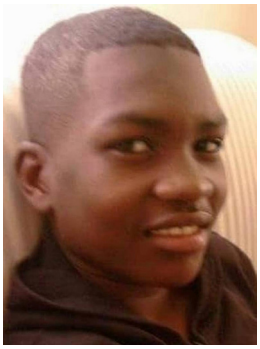
Surveillance videos fuel an investigation into Florida's juvenile justice system

By **Casey Frank**, The Miami Herald

Show, don't tell

Still shots from some of the surveillance videos obtained by the Miami Herald from the Florida Department of Juvenile Justice through public records requests.

The Miami Herald's "Fight Club" series began with a tip about the death of a detainee at the Miami-Dade Regional Juvenile Detention Center. We were told Elord Revolte was ambushed by several of his peers, who stomped and slugged him for more than a minute. After the beating, he apparently writhed in pain for a day, ignored by medical staff, until he was taken to a hospital, where he collapsed in the arms of a nurse — dead at 17.



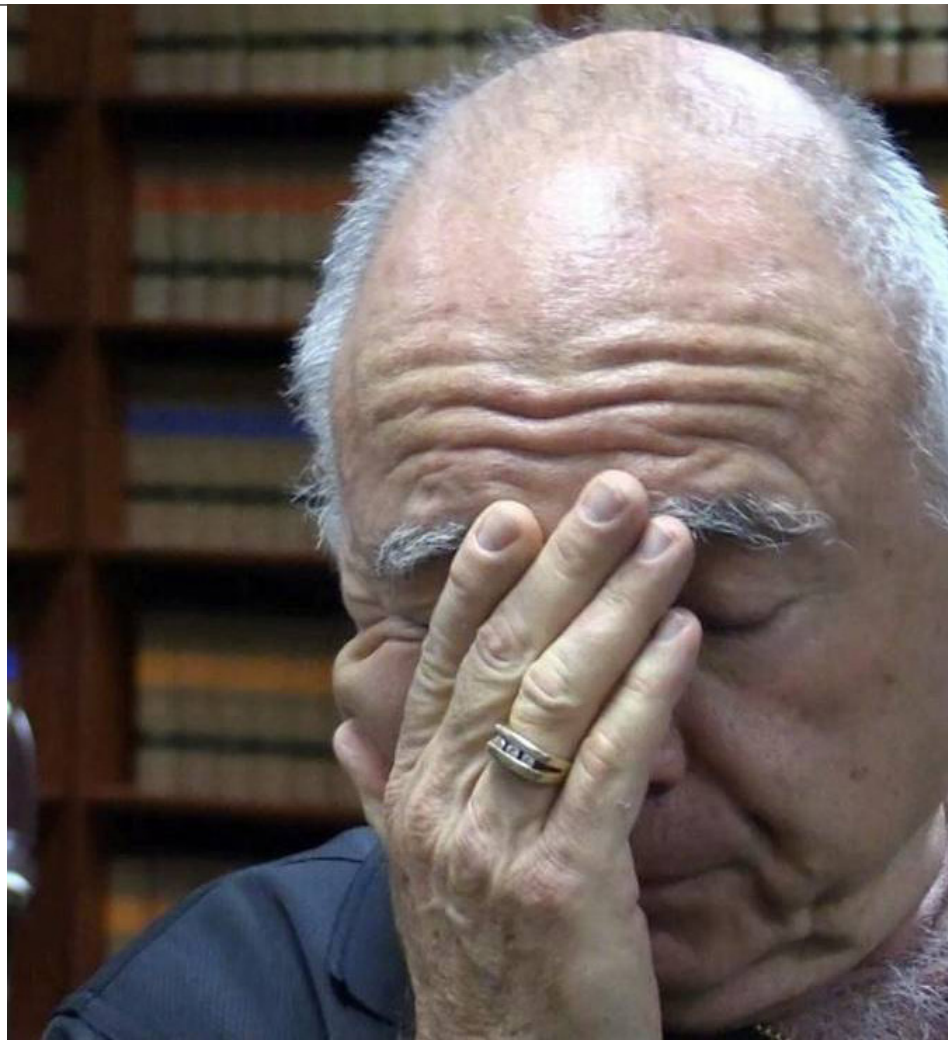
Elord Revolte

Startlingly, we were told a guard orchestrated the assault, possibly offering snacks to the detainees as a reward. Such attacks, a way of controlling the behavior of would-be rebels, were so common they had a name: "honey-bunning," after the gooey pastries favored by enforcers and sold in the officers' break room.

When investigative reporters Carol Marbin Miller and Audra D.S. Burch wrote of the attack and included the "honey-bunning" angle, we felt certain some sort of legal reckoning had to follow — for the attackers, if not the alleged instigator. Nothing. Told by the Miami-Dade Police Department and state attorney's office that the investigation was complete and no charges were warranted, we requested the investigative close-out memo. It referenced surveillance video.

We requested the footage.

It's one thing to quote from reports describing how a dozen youths were allowed to kick and punch a fellow detainee in a state-run institution



until he was dying. It's quite another to show it, even on fuzzy, herky-jerky surveillance video. The video brought to mind many questions, including how 12 kids could do this on camera, admit their actions to police and prosecutors in some cases, leave a kid dead after car-crash-type injuries and not face charges for...something?

An indication of how seriously the state took the investigation: Authorities didn't bother to tell Elord's father no one would be held accountable. That task fell to Marbin Miller and Burch.

The Elord documents shifted the paradigm of the "Fight Club" investigation. From that moment forward, we knew video would be a critical component — not just of the reporting, but of the presentation, branding and social media promotion. Under the supervision of senior editor/digital Eddie Alvarez, video was incorporated into the splash page, distilled into short bites (our analytics suggest most of our audience won't watch more than a minute or two) and embedded contextually in the stories.

Getting the videos

Despite Florida's relatively broad public records law, getting the video was not as simple as saying "send us all your footage of kids being abused by fellow detainees or adult officers." We were fishing in murky waters.

First, we requested a data set containing more than 20,000 allegations of abuse, neglect and staff misconduct from the state Department of Juvenile Justice. This provided the skeleton to much of the documentary research.

After culling that database, reporters requested more than 600 incident reports, focusing on unnecessary and excessive force, sexual misconduct, medical neglect, failure to report and falsification. These incident reports, which often took months to arrive, led to requests for thousands of pages detailing investigations by DJJ's inspector general.

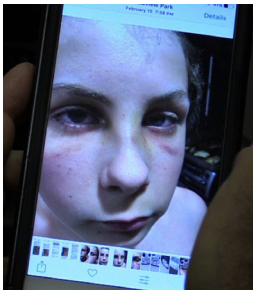
Buried inside those documents, as well as related police reports and lawsuits, were references to exhibits reviewed by inspector general's investigators. In many cases, the exhibits included surveillance videos. That footage offered powerful evidence of a culture of cruelty and retribution.

It showed two detainees engaging in an MMA-style brawl while a guard played referee; a detainee punching and stomping a fellow detainee in a closet-turned-gladiator-cage while guards observed impassively; a staffer slamming a boy into a metal table, costing him a kidney; and a detainee climbing atop a desk to disable a surveillance camera before a group of detainees battered one of their peers. (A different camera caught the attack.) The attackers had been — you guessed it — encouraged by a juvenile justice staffer, according to the file on the internal investigation.

We saw sucker punches, wall-slammings, a large youth officer squat on a female detainee for more than half an hour, and an all-out brawl.

In still another video, from the Broward Juvenile Detention Center, a bulky guard body-slammed and slugged a skinny 14-year-old named Andrew Ostrovsky, breaking his nose. Visual journalist Emily Michot showed it to the boy's father and filmed his anguished reaction. It was haunting.

For years, the Herald has fought the Florida Department of Corrections in court over access to prison surveillance video and has only recently made headway. The department argues that posting any video from inside a prison would alert inmates to where cameras were positioned (in fact, some cameras are clearly visible) and enable prisoners and their compatri-



Andrew Ostrovsky, 14, was body-slammed and punched in the nose by a detention officer at the Broward Regional Juvenile Detention Center. The assault was captured on video.

EMILY MICHOT/MIAMI HERALD

Uri Ostrovsky gets emotional as he watches surveillance footage of his 14-year-old son being beaten by a guard.

EMILY MICHOT/ MIAMI HERALD

ots to plot elaborate breakouts. This prohibition allowed corrections officers to abuse prisoners with impunity, one reason Florida prison deaths have reached previously unseen heights.

That the Department of Juvenile Justice gave up the videos without a fight was a little surprising. The department may have had little choice because they take the position they're not so much a "corrections" agency as a rehabilitative one. It may also have been due to a precedent-setting ruling in 2006 in a suit brought by the Herald, seeking the release of video from a military-style boot camp where a 14-year-old died after being brutalized by staff.

Also, to the department's credit, when we asked for a dialing back of the legally permitted blurring that was done to obscure the identities of young detainees, it did so. This back-and-forth process, however, took months, causing the project to drag on far longer than we'd hoped.

The department did, however, bury us in hours of irrelevant footage from every conceivable corner of various compounds, forcing us to engage in a scavenger hunt for the relevant scenes.

Casey Frank is the Miami Herald's senior editor for investigations and enterprise.

Impact and indignation

Although pursuing the video substantially delayed the rollout of "Fight Club," the postponement paid off by enhancing the project's impact.

And there truly was impact. State lawmakers toured at least three lockups and pronounced themselves appalled, not by the out-of-control fighting — there were no brawls during the visits — but by the wretched sights and smells.

After a decade of stagnant wages, Gov. Rick Scott proposed an immediate 10 percent pay raise for detention officers in hopes of luring more qualified applicants. Lawmakers matched that with a one-time bonus for workers at privately run youth programs. DJJ hired an ombudsman to deal with youth and family complaints. Legislators passed a law allowing them — as well as prosecutors and public defenders — to enter any juvenile facility unannounced to do an inspection. The department overhauled its screening procedures to minimize the hiring of violent criminals. The Department of Juvenile Justice hadn't checked the state's own personnel files, resulting in the hiring of dozens of former prison guards who were jettisoned for beating up inmates, having sex with subordinates, sleeping on the job — even felony arrests.

The public responded to the videos with indignation, reflected in letters to the Herald and pressure on lawmakers. A nice byproduct of the videos: they drew the attention of national media, further intensifying the project's reach. Though some videos were intense, they weren't graphic. We never considered content warnings. As a general rule, we don't like to pull our punches when dealing with major enterprise.

In the end, the Miami-Dade State Attorney's office — the same people who said "nothing to see here" after initially viewing the Elord Revolte video — announced it would present the findings of "Fight Club" to a local grand jury.

And a different grand jury — this one federal — stepped up and charged the detention officer suspected of instigating the beatdown with violating Elord Revolte's civil rights. Antwan Johnson, the lockup guard, was himself locked up and awaiting trial.

But then there was this: On April 23, the Herald reported on the Broward state attorney's office verdict on the body-slam and punch-in-the-nose endured by Andrew Ostrovsky: No crime was committed, prosecutors said. The skinny teen, not the stocky guard, was deemed the aggressor.

In Florida, it's fair to say, "juvenile justice" is still a work in progress. ◆

FOI FILES

Public pixels

Tips for getting government video

In public records reporting, there's no better rush than moving pictures. Journalists have produced spectacular stories by using public record laws to acquire videos that add punch to statistics and the written word. Here are a few examples:

Fight club. The Miami Herald was a Pulitzer finalist this year for its investigation into juvenile prison abuses. In addition to analyzing 10 years of data, the reporters obtained prison video showing disturbing scenes of teens pummeling each other on the orders of employees. The series spurred legislative reform and agency changes.

Coffer crooks. Reporters at KBCI-TV in Boise, Idaho, investigated financial corruption in city government by sifting through credit card expenses and acquiring City Hall surveillance video that showed the mayor, police chief, and other subordinates hauling loot they purchased with tax dollars for personal use. The story won a 2004 duPont-Columbia Award and resulted in the jailing of the mayor, his chief of staff and the city's human resources director.

Killing Pavel. The Organized Crime and Corruption Reporting Project and Slidstvo.Info won a 2017 IRE Medal for their documentary investigating the car-bomb murder of reporter Pavel Sheremet in Ukraine. The journalists examined footage from more than 50 surveillance cameras to identify the couple who planted the explosive in Sheremet's car and revealed the license plate of the suspects' car. The journalists requested video footage from private businesses, and some even provided it.

The growing prevalence of government surveillance cameras empowers journalists and citizens to keep an eye on those behind the lens — provided they can get access.

Eye on Big Brother

Virtually all state public record laws define "records" broadly enough to include anything electronically recorded, including video and audio held by government agencies.

Some government videos are obvious, like recordings of public meetings and agency-produced videos posted online.

Others are less evident. To find them, check retention schedules, which lay out how long records are maintained or archived. Or, submit requests for any documents related to video cameras purchased or maintained by the agency.

Assume any public or semi-public venue might have some government camera watching it, including building foyers, school buses, prisons, official vehicles and civic events.

Exemptions still apply, so agencies might argue that a particular video should not be released. But like any other public record, the agency should redact the exempt materials and release the rest. That might entail using software to blur faces. Nowhere has this been more important than in police body camera footage.

By **David Cuillier**, *University of Arizona School of Journalism*

David Cuillier, Ph.D., is an associate professor at the University of Arizona School of Journalism in Tucson, Arizona, and co-author with Charles Davis of "The Art of Access: Strategies for Acquiring Public Records."

New tools, new laws

The Reporters Committee for Freedom of the Press posts a state-by-state breakdown of body-cam laws, as well as guidelines adopted by cities (*rcfp.org/bodycams*). About half the states passed laws clarifying access to body cam footage, mostly for the worst.

Some states make body cam footage presumptively secret unless the public interest would suggest otherwise. Other states made police recordings completely exempt. Another dozen states proposed various laws, and in some states case law dictates the ability for the public to acquire the footage. The bottom line is that nationwide, it is generally more difficult now for the public to view these video records, and it's likely to keep moving in that direction unless journalists and victim-rights groups push back.

So, what can you do?

First, arm yourself with the law. More up-to-date details about the status of electronic records will be available this fall when the Reporters Committee unveils its new online Open Government Guide, last updated in 2011 (*rcfp.org/open-government-guide*).

Then, request government surveillance video for a random recent day as a "training-wheels test." This will allow you and the agency to work through any retrieval issues. If an agency has provided you footage in the past, that will make it harder for them to deny your request when you really need it.

Finally, routinely order government video to bolster trust and credibility in your stories. Don't just tell readers what's going on in your community. Show them with video. ◆

COLLECTED WISDOM

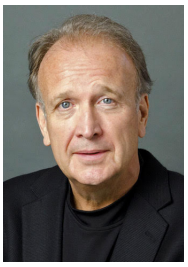
The perils of production

Smart editing choices preserve accuracy and context

I learned a lesson about how production techniques can signal our own feelings when my mother called me after a newscast to complain about my story.

The piece was about aging inmates, and I chose to focus on a Tennessee man who fatally smothered his wife. It was a beautiful foggy morning when we went to shoot B-roll of him walking around the prison yard, and a singing mockingbird perched on the barbed wire. I added a barely perceptible piano riff to the opening scene as the aging man groaned his way around the yard.

My mother said something like, "You are trying to make us feel sorry for him. He is a killer." She said the beauty shots and music softened the horror of his crimes. My mom was right. I did feel sorry for the old guy, and I know now that adding music is just one way we reveal our biases.



By
Al Tompkins,
Poynter

Music and added noise

Academy Award-winning composer Aaron Copland said music "works on" the viewer, even if they don't know it. Music, he said, serves a "fully emotional purpose."

Composer John Williams is the king of the leitmotif, a musical term for a recurrent theme associated with a particular person, idea or situation. Williams used it to signal the shark in "Jaws." Two notes "grinding away, coming at you, just as a shark would do," he said.

I often see investigative journalists adding leitmotif tones to their stories. Often it's dark and foreboding. You know the guy with the dark music playing under him is going to turn out to be the bad guy. That music could be just what a plaintiff's lawyer needs to pry into your state of mind while suing you for defamation. You can testify about how you tried to be fair, but just try to explain to a jury why you added dark music under video of your main subject.

Lighting

We alter a scene the very moment we strike the first light. At a minimum, we should recognize how lighting and shadows set a mood. Saturated colors like deep blues and purples add emotion. Muted tones tamp down emotions. Shadows add mystery. Hot lighting can amplify skin imperfections, oil and sweat.

The most defensible lighting for news is the lighting I don't notice.

Location, setting and background

Right after John McCain lost the 2008 election, Sarah Palin returned to Alaska where, just before Thanksgiving, she stood at a turkey farm and pardoned a turkey. Photographer Scott Jensen, then of KTUU-TV, said he told the governor she might want to move over a bit. She didn't. And so, while Palin told the TV crew how happy she was to be home, a farm worker slaughtered a turkey in the background, feeding the bird headfirst into a metal cone. You can watch the video 10 times and never hear what Palin is saying because you can't believe what you're seeing.

If you create a backdrop, ask yourself what a reasonable viewer would interpret it to mean.

The best location is one that makes a subject feel relaxed and helps them recall details about the story you're exploring. Avoid distractions and pay close attention to background noise.

Slow motion and dissolves

Post-production decisions are always subjective. Slow-motion effects tend to make subjects appear guilty or vulnerable. If you alter the speed of a video, it should be obvious and it's best if you explain why you did so. Just add a line that says, "We slowed the video so you could see the gun in his left hand."

Photojournalist Lynn French once told me, "You live in cuts and you dream in dissolves." By that she meant dissolve transitions signal a change in place and time, so don't use them without a purpose.

Be cautious with file video

When I was a news director, a viewer called to complain that his image was on TV. I asked him where he saw himself, and he said something like, "I see myself all the time." I realized he was the guy we used as the "generic drunk driver" for a series of stories on repeat offender DUI cases. He was in our promos, our stories, everywhere, and his case was settled a long time ago. It was unfair and lazy for us to keep using his image.

What recurring images are you using that are unfair to the people you are showing?

Editing is altering. Everything you edit involves subjective decisions. Context can be the first victim in the editing process, so preserve it knowing that accuracy plus context is what leads to truth. ◆

Al Tompkins is Poynter's Senior Faculty for Broadcast and Online. His book "Aim for the Heart" is used in more than 125 university journalism departments around the world.

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