Tracy

Persona name: Tracy

Persona role: The expert. Tracy is a senior analyst that has enjoyed a long career of intelligence successes. Because of these numerous successes, Tracy has perfected her tradecraft and is resistant to change. A linguist, she is quick to criticize technology and complains that the large number of tools that are developed for analysts are overwhelming while products usually underwhelming. When it comes to target knowledge, she is undeniably an expert and she frequently gives talks to analyst groups to pass on her institutional knowledge and insights. Busy, no nonsense; Tracy has better things to do than chat with you about Internet cats.

Job description:

Linguists use their knowledge of other cultures and languages to help the FBI fulfill its mission to protect the United States from threats both international and domestic. Linguists work with a team to defend the country against foreign counterintelligence threats, corruption, espionage, cybercrime and other mission areas.

Duties can include, but are not limited to:

- Translating written or audio materials, normally from a foreign language into English.
- Interpreting during a crucial interview of a subject of an investigation or a visit from a foreign dignitary.
- Providing cultural expertise.
- Data analyses for SOIs and curating knowledge to answer intelligence questions and write reports.

Company

Company name	Big Intelligence Agency
Company size	10000+
Industry	Government - Intelligence

Demographic information

Age	56
Gender	Female
Income	$140000
Education level	Bachelors
Residential environment	Suburban

Personal quote
Biography
Graduated college with a degree in International Studies and immediately went to work for the IC. To deepen her expertise, she accepted an assignment abroad and lived overseas for four years before returning to the Mid-Atlantic region. Tracy accepts periodic deployments to regions of interest to refresh knowledge .

Professional goals	Motivators
• Mission success • Analyst expertise	• Protecting U.S. interests

Challenges	Sources of information
• Well-defined tradecraft developed across many years of experience • Resistant to adopt new tools •	• Cultural sources of information such as newspapers • Periodic deployments for cultural refreshes

Additional Questions

1. Describe your workflow in a nutshell.
2. What part of your job do you wish could be automated and why?
3. What different types of analysts are needed to complete your typical workflow?
4. What aspect of your job is most aggravating?

5. What types of activities do you find yourself spending most of your time on as an analyst on any given day?

Elle (Michelle)

Attached is a description I put together that we shared with one of the AAR team performers last year so that we could help him better understand what we do. If you think it's appropriate to share with the students, I think it would be helpful. They should know that the experience varies from office to office, depending on the particular mission. This should answer question 1.

For question 2, the part of my workflow that I wish was more automated was the presentation of query results. Sometimes queries return hundreds of results and there are limited scenarios where the built in visualization tools can be helpful. When they are helpful, they are a Godsend. When they're not, it's lots of manual work to make sense of the result set.

For question 3, I'm not sure I really understand the question. Is it asking what types of analysts I collaborate with to do my work?

For question 4, there are several, but I'll narrow it down to the top of the list. At number 1, all of the odd jobs that don't fit in nicely with other work roles typically fall to the IAs, like we're jacks of all trades and can do anything. This clutters up our days and sometimes makes us feel as though we're catching curve balls because they come out of nowhere. Another thing that is toward the top of the list is the customer perception that we are leaving "information on the cutting room floor." There is no cutting room floor. Oftentimes there isn't a clearly articulated requirement for the information they think is laying there, or we simply lack the resources to touch every bit of information that comes in.

For question 5, I was spending a lot of time in my inbox, and that's not necessarily a bad thing. As you develop relationships with your customers--as a good analyst should--you find yourself getting more email from them and answering questions, etc. I never minded this because it meant I was doing my job and I enjoyed it. However, the inbox is also where the curve balls come in and I would find myself trying to answer questions that sometimes required tools I didn't know how to use. That meant more time invested in answering the task. The inbox is also where requests for coordination came in, whether it was for another office's report, or an agency-wide effort. This is a good way to find out what other related offices are working on before publication and an opportunity to point out any inconsistencies. The IC-wide coordinations were even more interesting because sometimes they would include incites that your reporting highlighted.

Kari

Persona name: Kari

Persona role: The ace. Though she hasn't been around as long as Tracy, Kari has developed considerable analyst expertise. Kari is quick to try out new tool capabilities and counts product champion as one of her many duties. She seeks to learn new technologies in order to decrease the complexity of her tasks or improve the reliability of her analytical conclusions.

Job description: As an analyst, the expertise you bring to the job and continue to develop through your daily work and continuous training will make you part of a process that reaches right to the top of national policy decisions. Analysis is a vital part of the nation's Intelligence Community, both advising and receiving oversight from the executive and legislative branches of the US Government.

Working closely with analysts, our multimedia producers, graphics designers, and cartographers craft products that convey our analytic judgments more effectively. From computer simulations to multi-dimensional maps, graphics specialists draw on their creative expertise to play an active and unique role in supporting the intelligence mission.

The intelligence analyst's mission to analyze a diverse set of countries, issues, and cultures means we look for individuals with a variety of academic backgrounds and disciplines from a variety of institutions. All our employees must be US citizens. If you are looking for the chance to contribute, if you like intellectual challenges, if you thrive on a fast-paced environment, and if you want to make a difference, then a career as an IA may be for you.

Company

Company name	Big Intelligence Agency
Company size	10000+
Industry	Government - Intelligence

Demographic information

Age	33
Gender	Female
Income	$120000
Education level	Masters of International Affairs
Residential environment	Urban

Personal quote
Analysts spend a lot of time searching through query results to find answers to questions. We think that we would save analysts time by extracting data from the query results that answers some of the foundational questions they're asking (or need to ask and answer).

Biography
Kari has lighting up her mid-career with numerous target successes that routinely reach the attention of senior leadership. Building off her undergraduate work in Political Science, she came to work for the BIA 15 years ago. While working as an IA she pursued a Masters degree in International Affairs from nearby GWU. She had a great introduction to BIA's mission through a series of tours in different offices, quickly coming up to speed on the product lines and building a network of experts in dedicated technology and analysis fields. Because of her interest in maintaining sharp technology skills, she is routinely sought out to test new capabilities and provide feedback. She is a bright star with a bright future as a leader in the intelligence community.

Professional goals	**Motivators**
- TOPI for a Product Line - Field Experience working with international partners	- Building a better intelligence system through new technologies - Autonomy to investigate analytical avenues
Challenges	**Sources of information**
- Can't cover all of the data resources she would like to - Publication of working analytical theories to promote a larger knowledge base across the community	- News media - Books - Journal articles - Mission-related social networks

Additional Questions

1. Describe your workflow in a nutshell.
2. What part of your job do you wish could be automated and why?
3. What different types of analysts are needed to complete your typical workflow?
4. What aspect of your job is most aggravating?
5. What types of activities do you find yourself spending most of your time on as an analyst on any given day?

Ken

1. **Describe your workflow in a nutshell.**

The specifics of my process change depending on exactly what I'm doing, and how much I know about the topic at hand, and how well I understand the data that needs to be analyzed. However, in general I first start with a question (either one asked by a customer, or a question I've come up with that's relevant to a customer need), and I'll spend some time refining and clarifying the question. If it's a new question (or one I haven't investigated in some time), I'll search through historical documents to see if it's been answered already. This process can also provide me with information that I'll use to help me "hunt" for answers in the data.

Once I've completed information survey/pre-query searches, I'll create a predictive analytic strategy. Which is essentially a hypothesis (or multiple hypotheses, some strategic, some operational): If I look for X in Y, I'll find my answer. X is a query (or something like it), and Y is a database/dataset or tool. (There are often many Xs and Ys in order to find the answers to most questions).

At this point, I'm almost ready to run a query for data (which is different from running a query for reporting). One of the main differences is I have to make sure my query is legally compliant. A number of checks are run to ensure compliance. Once I know the query is compliant, I'll run it, get results back, and start analyzing those results.

This stage can get really complicated to explain, but in short, I'm looking for data that will help answer my question. I do this by triaging the results, sorting and re-sorting the data so the data that will most likely answer my question appears, or is most visually prominent. Sometimes I do this in a table, other times I do this in some sort of visualization. This stage is kind of like rapid-fire hypothesis generation and testing. I'm often looking to identify the data's baseline (this helps put things in context), looking for important/relevant nodes, connections, trends, anomalies, and, of possible cause and effect or correlations.

While I may have had one specific question in mind when I created and ran the query, the query results may (and often do) have answers to many lower-level questions. Any relevant information I come across usually gets stored somewhere. If it's developmental information

(i.e. something that's useful, but wouldn't appear in a report), I'll put that in a personal file. If it's reportable information, I'll send it to a corporate tool so it's accessible to others in my team (where it's either translated, picked up by a reporter for reporting (if I'm not the one writing the report), or for management to see so they can maintain situational awareness).

Once I have enough information to answer a question/write a report, I take all the info, and do a deeper analysis to make sense of it, pull out and investigate any leads, and basically make sure I'm in a position to get the most out of the information. Sometimes I apply an SAT...especially if the data/topic is especially complex. More often than not, I just follow reporting guidelines (attached).

Speaking of attached, I've attached a couple PDFs I made that lay this out visually. One is from 2018, the second is from 2019. The 2019 version includes pain-point information, and where in the workflow they may appear. However, the PDFs don't include information on the reporting process (which, in the opinion of someone who has done both throughout their career (me), is less complicated and far more straightforward than the information discovery process I've laid out in more detail).

2. What part of your job do you wish could be automated and why?

In no particular order: I'd like to automatically, and in real time, know the customer's prioritized needs; I'd like to automate the compliance process; I'd like to have workflows automatically documented; I'd like for "fact of" reports to be automatically generated so I can spend more time on deeper analysis; I'd like for the triage process to be automated, so I can spend more time determining if the relevant information is important, instead of spending lots of time sorting and searching for the relevant information. The pain points in the "A Slice of What Analysts Do" PDF list other areas that could/should be automated.

3. What different types of analysts are needed to complete your typical workflow? At a very high level, we need analysts that can search through data to find reportable information, we need analysts who can take that reportable information and write reports, we need language analysts for translations, and we need analysts who understand the subject matter (SMEs). Sometimes these are all different analysts, other times it's one analyst doing all, or almost all, of these jobs. It depends on the analyst skill level, and how the office is structured.

4. What aspect of your job is most aggravating? This depends on a number of factors (the nature of the subject matter, the type of data we're analyzing, where we're located, our computer's speed/power, etc.). Sometimes the most aggravating part of the job is the volume of data we have to go through, other times it's that we're suffering from a lack of data. Sometimes we're not getting enough customer feedback, and other times we get too much. In general, the pain points listed in the PDF provide some of the commonly mentioned aggravators.

5. What types of activities do you find yourself spending most of your time on as an analyst on any given day?

This depends on which office I'm in. Although, in general, I would say I usually spend about 60% of my time doing what I described in my answer to question 1. The rest of the time is spent mentoring (or when I was a junior analyst, getting mentored), working with customers, administrative duties (i.e. classes, mandatory training, meetings, auditing), collaborating with my fellow analysts, and checking/editing team members' reports.

Seth

Persona name: Seth

Persona role: The noob. A junior analyst, Seth is still discovering many parts of the intelligence product line. Seth is familiar and adept at technology, but is still learning how it applies to intelligence analysis. Seth frequently seeks out guidance from both Kari and Tracy about target knowledge and tools. The new hires are often the most enthusiastic of the analyst corps. However, this is a double edged sword. Their enthusiasm drives them to devote a tremendous amount of time and energy to improving their craft (i.e learning the targets, learning the tools, learning the players on the US and partner side). However, this enthusiasm can also cause them to over-pursue red herrings. They're so eager to find actionable intelligence, that they sometimes gloss over their due diligence.

Job description: The professionals at the Big Intelligence Agency (BIA) have one common goal: to protect our nation. The mission requires a strong offense and a steadfast defense. The offense collects, processes and disseminates intelligence information derived from foreign signals for intelligence and counterintelligence purposes. The defense prevents adversaries from gaining access to sensitive classified national security information.

The explosion of Internet communications has created a need for the Computer Network Operations (CNO) mission. This very important mission includes computer network defense and

computer network exploitation. Big Intelligence Agency is looking for analysts who are highly skilled, want to stay on the leading edge of technology and impassioned about ensuring the United States maintains a strategic edge in cyberspace.

Computer Network Analysts are hired into positions directly supporting a technical mission office (either on the offensive or defensive side) or one of a few different development programs like the Intrusion Analyst Skill Development Program (IASDP) and the Cybersecurity Operations Development Program (CSODP) (formerly named the Information Assurance and Cyber Development Program (IACDP)). These development programs are 3 years in length and combine formal training and diverse work assignments that may cross both offensive and defensive missions.

As a Computer Network Analyst you will:

- identify cyber threats and anomalies by conducting research and analysis on data collected from numerous sources
- identify vulnerabilities and their impact to customers
- build and integrate defense response capabilities against these threats

Job Summary

Big Intelligence Agency is in search of top-notch cyber professionals with technical expertise and driving desire at the forefront of their field. We have positions in penetration testing, defensive operations, identifying cyber threats and vulnerabilities and building defensive capabilities, designing, developing, deploying, sustaining and monitoring state-of-the-art network solutions (WAN, CAN, LAN, DCN and Satellite communications networks).

Company

Company name	Big Intelligence Agency
Company size	10000+
Industry	Government - Intelligence

Demographic information

Age	26
Gender	Male
Income	$80000
Education level	Bachelors of Information Technology

Residential environment	Suburban
Personal quote	
"There's so much to learn."	
Biography	
As an undergrad at NC State University, Seth accepted a summer internship at the Laboratory for Analytic Sciences and was excited about the idea of helping the nation's national security mission. After graduating with his Bachelors in Information Technology, he went to work for the BIA as a CNA as part of their Cybersecurity Operations Development Program. After touring in 5 offices, he went to work as an analyst in the Security Operations Center, growing his experience in analysis evaluation and operations.	

Professional goals	Motivators
• SOC Technical Director	• Develop expertise • Exciting, fast-paced work environment • Technology

Challenges	Sources of information
• Vast breath of the computer network technology	• Computer network security reporting

Additional Questions

1. Describe your workflow in a nutshell.
2. What part of your job do you wish could be automated and why?
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4. What aspect of your job is most aggravating?
5. What types of activities do you find yourself spending most of your time on as an analyst on any given day?

Michaela

1. Describe your typical workflow in a nutshell.

- Receive RFI from mentor/supervisor.
- Most of the RFIs I deal with right now is written by non-native English speakers, or is not translated in house, so there is an added step of 'deciphering' the situation.
- Begin drafting based on details in RFI.

- Search databases for background information on entities, as well as to find out what unfamiliar terms mean and how important those elements are.
- Inout connectivity (that I found via background research) into my report draft
- Go through the steps of inputting specific key notes and mechanics into the portal
- Revise and ask others to edit my draft
- Revise based on edits and suggestions
- As a new analyst- Throughout the drafting process, and while illustrating connectivity, I touch base, and consult my mentors.
  - This is time consuming, but is a necessary and helpful part of being a new analyst. Asking for input then readjusting course accordingly ensure that my reports are concise and accurately reflecting the information.
- Finalize my draft and send it to a senior analyst for final approval before it's sent to the customer/sent out.

2. What part of your workflow would you most want automated and why?

- I'd like to be able to more quickly find elements discussed in my report. In a recent report, I found a subject in the database system that I *think* is the correct one, but I had to chase it down with varioous search terms, and check with the subject matter experts.
- Perhaps not automated, but it would be helpful to have a list of resources and tools available and a brief description of what they do/offer. I've created a list on my own as I find tools and resources, and as others mention them or show them to me. But having a repository right away would help de-mystify the process.
- Oftentimes the machine generated translations are not accurate. Perhaps enhancing this feature could streamline workflow.

3. What types of analysts are needed to help you with your workflow.

- Translators are extremely helpful. When I am working with a native language to English translation, I check back with the scanner/translator to confirm I understand and am accurately portraying what's being said.
- Other types that are needed are editors and mentors.

4. What task do you find most aggravating?

- An aggravating aspect is when I am 'on a roll' with a report drafting and I have to stop fir a meeting/training.
  - On the other hand, the meetings/trainings are extremely useful to help me better understand the data and tools at my disposal.
  - Relatedly, it can interrupt workflow and be time consuming to wait for feedback from other reporters for guidance on a report.
  - The mechanics of working within the reporting tool can feel clunky, rather than the actual writing part.

5. What task takes the most time in your day?

- Analyzing and deciding what is most important to include in the report (including chasing down acronym meanings by searching databases for other related reports that used a given acronym). As said in the meeting, gaining background knowledge is necessary but time consuming.
- In cases where I have associated documents, it can be very time consuming to figure out what technical/related details are useful for the customer and should be highlighted within the report. I am confident that this will get easier with time and continued exposure to the subject matter.
- As said above, receiving input and adjusting course appropriately can be time consuming, but it's worthwhile.