March | *2017*

US-DiGIA: Overview and Methodology of US Discoverable Government Information Assets Directory

Prepared for
Strategic Multi-Layer Assessment
Gray Zone Conflicts, Challenges, and Opportunities: A Multi-Agency Deep Dive Assessment

Project Team: Belinda Bragg, Ph.D.; Sabrina J. Pagano, Ph.D.; John A. Stevenson, Ph.D.

POC: Sabrina Pagano, spagano@nsiteam.com

Deeper Analyses
Clarifying Insights
Better Decisions

www.NSIteam.com

Table of Contents

INTRODUCTION AND OVERVIEW OF THE US-DIGIA DIRECTORY RESOURCE

The United States Government possesses a vast store of **information assets** that can be leveraged to inform a variety of problem sets, and can be used by a wide range of governmental actors in the formation and execution of **whole-of-government** strategies. To enable this goal, however, these assets first must be made accessible in a single source that catalogues the information that is held.

What is US-DiGIA?

The **US "Discoverable Government Information Assets" Directory** (**US-DiGIA** for short) resource catalogues the discoverable information assets (practical information, data, analysis, and subject matter expertise) relevant to **national security** and **foreign policy** held by the USG in a simple, easy-to-use searchable directory.

The US-DiGIA Directory is focused on "discoverable" information assets—that is, those information assets that are both open source (unclassified) and made available and/or identified as information assets held by the organizations that the NSI team examined. By focusing on which information assets are "discoverable," this mapping does not claim to represent the true distribution of information assets across the whole-of-government, but instead captures what can be observed and obtained through unclassified channels—and thus potentially accessed via an **interagency process**.

US-DiGIA compiles and categorizes the information assets of 236 offices across 22[1] combined US government departments, agencies, and corporations (referred to collectively as "USG organizations"). US-DiGIA catalogues 1,305 unique information topics culled from these combined sources, and accounts for 1,980 total information topics (as some offices work on overlapping issues).

To create the US-DiGIA Directory, the NSI team developed a methodological process (detailed below in the section entitled, "US-DiGIA Mapping Methodology Process") for taking the unstructured data culled from USG organization websites examined and translating them into information assets. The NSI team created an extended record[2] of data sources, including mission statements, links to documents and tools, related web pages, and contact information. On the foundation of this rich source of information, the NSI team in turn developed the US-DiGIA Directory.

Who Should Use US-DiGIA?

US-DiGIA is a resource for defense analysts, operators, researchers, forecasters, and policy-makers seeking to locate discoverable, unclassified *information assets* within the United States Government. US-DiGIA can decrease the time to task completion and expand and enhance the breadth of *information asset* inputs. US-DiGIA is thus for users who need to minimize time to *information asset* discovery, to more efficiently cull and review information needed to complete tasks and inform critical decisions.

US-DiGIA is also a resource for those seeking to develop whole-of-government strategies. It provides users with a consolidated resource that enables quick and easy identification of multiple organizations and offices addressing the same topics, in turn enabling identification of potential partners for inter-agency collaboration.

US-DiGIA Can Be Tailored to Users' Questions

The current task was focused on creating a resource for mapping USG information assets relevant to gray zone challenges (described below in the section entitled "Creation of Gray Zone Coding Scheme"). As such, our directory is tailored to enable the user to search for information assets that can inform the gray zone problem set. Given its flexible structure, US-DiGIA can also be tailored to address other problem sets of interest to users by using a similar approach to the one employed for gray zone challenges. US-DiGIA thus enables application to a variety of topics—and new tailored versions of US-DiGIA can be created, as needed, as new problems gain salience and importance.

---

[1] The NSI team culled information assets relevant to national security and foreign policy interests in all of these organizations, with the exception of the Department of Housing and Urban Development, which we thus exclude from US-DiGIA.

[2] This resource (PowerPoint format) was created to facilitate the development of our US-DiGIA Directory, but can be made available upon request. At the department, agency, or corporation level, the NSI team includes organization charts, while at the office or sub-office level, we include org charts (when available), mission statement/scope, hotlinks to sub-units whose discoverable information assets did not merit their own slide, reports and publications generated by the office that were identified as useful and relevant, information topics addressed, information types—that is, the identifiable formats in which the indicated information assets can be found (e.g., raw data, reports, etc.), and geographic AOI.

What Type of Content is in the US-DiGIA Directory?

The searchable US-DiGIA Directory is instantiated in Excel format and includes:

- A unique id number for each row of data
- USG Department, Agency, or Corporation name
- Relevant sub-office names
- Coding for geographic AOI (at the most specific level of information provided or inferred)
- Almost 2,000 information topics for which the organizations and offices examined hold information assets
- **Gray-zone tailored** information elements (broader gray-zone relevant categories into which the information topics are binned)
- Website and contact information (when relevant)

Examples of How US-DiGIA Can be Used

US-DiGIA can be used in multiple ways, including but not limited to the following:

- **Search by specific information topic**
  - Explore which organizations are working on which information topics
  - Examine the geographic coverage for information topics
  - Find relevant sub-offices that hold information on information topics listed
- **Search by gray zone element**
  - Explore which organizations are working on which topics
  - Examine the geographic coverage for gray zone elements
  - Find relevant sub-offices that hold information on gray zone elements listed
- **Search by geographic region**
  - Explore which information topics and information elements are being covered in a specific geographic region of interest
- **Search by department/agency or office**
  - Explore all of the discoverable information topics on which a given department, agency, or office is working
  - Examine all of the discoverable gray zone elements on which a given department, agency, or office is working
- **Search by the conjunction of categories above**
- **Search for website links or contact information for a department/agency or office** (where provided by the organization)

US-DiGIA MAPPING METHODOLOGY PROCESS

In addition to introducing users to the US-DiGIA Directory resource, the purpose of this appendix is to help the user understand how US-DiGIA was created, and help inform its effective use. For the **US-DiGIA User Guide** itself, refer to the US-DiGIA User Guide tab of the US-DiGIA Directory.

Selection Criteria for Information Assets and Organizations

Inclusion Rule for Information Assets

Our identification and coding of information assets included anything bearing on US national security interests and foreign policy, broadly construed. Using this inclusive guideline, it was appropriate, for example, to include topics such as human health and disease—and thus the organizations that investigate or hold information assets on these topics (e.g., the CDC). The NSI team mapped the information assets across non-DoD/ODNI[3] executive branch departments, as well as independent agencies and government corporations.

Inclusion Rule for Executive Branch Departments

The federal executive departments of the United States Government were the most obvious place to begin cataloguing governmental information assets, irrespective of whether those assets were in the form of information, data, analysis, or subject matter expertise.

The **mapping** of information assets included a department for review if the title and anticipated purview of the agency indicated potential for national security activity—once again, with the exception of the Department of Defense and the Office of the Director of National Intelligence. Thus, the initial "gate" for inclusion of a non-DoD/ODNI executive department was an inclusive one, with a low threshold. This calibration was especially important given the diverse nature of gray zone activities and the possibility that new activities may emerge over time.

Table 1 lists the eleven USG departments mapped for their information assets in the US-DiGIA Directory.

Table 1: List of USG Departments included in the US-DiGIA Directory

Department Title	
Department of Agriculture	Department of Justice
Department of Commerce	Department of Labor
Department of Energy	Department of State
Department of Health and Human Services	Department of Transportation
Department of Homeland Security	Department of Treasury
Department of the Interior	

Exclusion Rule for Independent Agencies and Government Corporations

Independent agencies are more difficult to track than executive Departments, as there exists "no authoritative list of government agencies," and "many federal entities do not neatly reside in the executive branch."[4] [5] However, these agencies were important to include in our mapping because

---

[3] Given client familiarity with information assets within the DoD and ODNI, US-DiGIA instead is focused on discoverable information assets outside of the DoD and ODNI.

[4] Administrative Conference of the U.S. (2012) Sourcebook of United States Executive Agencies, accessed at: http://www.acus.gov/research-projects/federal-executive-establishment

[5] Government Manual lists 96 independent executive units and 220 components of the executive departments, while the website USA.gov lists 137 independent executive agencies with 268 components.

they can compose, in some cases, critical parts of the intelligence community (e.g., CIA), foreign policy apparatus (e.g., USAID) and regulatory structure (e.g., Environmental Protection Agency).

The Federal government has utilized the government corporation model for a little over a century to accomplish a diverse array of specialized functions in specific commercial affairs. They are both a legal entity and a unit organized similarly to a private business. Entities range in size and function; given their potential breadth of relevant information asset holdings (e.g., the Overseas Private Investment Corporation holds information assets in foreign investment and trade), the NSI team thus chose also to include government corporations in our mapping.

The NSI team referred to the 2012 edition of the United States Government Policy and Supporting Positions (more commonly referred to as the Plum Book) to identify the universe of potential USG agencies and corporations to examine.[6] Independent agencies and government corporations were *excluded* from review if:

a. They were simply bilateral (e.g., International Boundary and Water Commission, Japan-American Friendship Committee)
b. Did not touch on inter-state issues in some way (e.g., selective service system, Nuclear Waste Technical Review Board)

Table 2 lists the ten agencies and government corporations mapped for their information assets in the US-DiGIA Directory.

Table 2: List of Independent Agencies and Government Corporations included in the US-DiGIA Directory

Agencies and Government Corporations	
United States Agency for International Development	Defense Nuclear Facilities Safety Board
United States Arctic Research Commission	Environmental Protection Agency
Central Intelligence Agency	Export-Import Bank
Chemical Safety Board	Overseas Private Investment Corporation
United States Commission on Religious Freedom	United States Trade Representative

Almost all federal departments and independent agencies possess sub-ordinate units to carry out discrete functions of the Department or Agency. In the US-DiGIA Directory, all sub-ordinate units are referred to as "offices." The NSI team uses the term "office" irrespective of how the subordinate unit refers to itself, as long as the unit was below that of the Department or Agency level. For example, in the Department of State, one of the more organizationally complex entities included in this information mapping, there are 65 offices at various levels of hierarchical

---

[6] Published after each Presidential election by the United States Senate's Committee on Governmental Affairs and the House of Representatives' Committee on Government Reform, the book is a list of Federal civil service leadership and support positions in the Federal Government nationwide. All agencies and corporations that were subject to Presidential appointments were considered before applying the exclusion rule.

organization covering 384 unique information topics. In using a common term, our data organization posits that what is most important for this information mapping is not at what level of the hierarchy the sub-ordinate unit is located, but rather, which specified domains of expertise that unit possesses.

Process for Deriving Information Assets from USG Organizations

Having selected the list of Departments, independent Agencies, and Government Corporations to be included in the information mapping, it was necessary to determine the actual discoverable information assets of each unit.[7]

 The NSI team established four steps to the information mapping methodology process:

1. Review of available organization charts for each relevant organization, providing an overview of the purview of each organization initially examined

2. Review of organization mission statements and scope

3. Detailed review of organization (i.e., department, agency, and corporation) websites to transform the unstructured raw data on the website into structured inputs in our list of information assets. This was accomplished either by directly recording the information topics listed by the organization as within their purview, or by distilling information topics following review of the title or content of materials (e.g., information found in reports, fact sheets, "about" statements, etc.) produced by that organization. Of necessity, this process involved some translation and decision-making from the reviewer.

4. Deeper dive into lower level nested offices, if merited by the top-level organizational descriptions. Where information assets held by lower level offices were available and relevant, they similarly were included in the list generated, along with other relevant office details (effectively repeating steps 1-3 above)

Organization and Coding of Information Assets

Information Topics

At the most granular level, our list of information assets includes the information topics about which each organization has information. For instance, the Office of Verification, Planning and Outreach (VPO) within the Bureau for "Arms Control, Verification and Compliance" (T/AVC) contains information on nine distinct information topics, including "counter-proliferation," "arctic economic potential," and "arms control verification." Its parent office, T/AVC, has information on 14 information topics, including "armed forces personnel," "arms transfers," and even "democracy measures."

---

[7] The NSI team examined both the top-level department, agency, or corporation, as well as any sub-offices that were relevant. It should be noted that government corporations do not generally have sub-offices, and are structured like private businesses.

The user can explore an information topic either by an individual office or, where applicable, across multiple offices that are addressing the same topic. For example, the user can explore the information topic of "border security" solely within the Department of Homeland Security if this is the user's primary interest, or look as well at the State Department or the Department of Justice, which also hold information assets on this information topic. Which choice is made will be a reflection of the user's question or interest. The user should also be aware that different offices may investigate or hold the information topics in different formats (i.e., information types), or place a different emphasis on them, as a function of their mission focus.[8]

Geographic Regions

Geographic region was determined and coded in a two-part process. Upon reviewing the organization websites, if a specific geographic region was noted, we recorded this information. This information was most often coded at the *department/agency/corporation or office level*, as this was the level of specificity most often available on the organization web pages. In other cases, the information topic itself was focused on a specified country or region, in which case this information was used to code geographic region. Consider the example of the United States Agency for International Development (USAID), for which coding typically was "international," with the exception of cases in which a more specific geographic region was specified (e.g., Eurasia or Latin America) or the relevant office was focused on internal administration (coded as US).

However, for the majority of departments/agencies and offices, no specific region was indicated. As such, the NSI team developed a guideline for coding the remaining information into a more general "international" or "US" geographic region. The first step of this process was to review the department/agency and office name for indications of external (international) versus internal (US) focus. If no determination could be made, the NSI team then reviewed the information topic for additional clues to the relevant focus area.

Based on these inputs, the NSI team coded information as international if the focus was external. Included also in this international coding were those cases in which the US was one of many actors involved (e.g., in international agreements). Consistent with this, the NSI team coded information as US if the focus was internal. Included also in this US coding were those cases in which there was an international component but the primary effect was on the United States (e.g., "global network security," an information topic investigated by the State Department's Office of the Coordinator for Cyber Issues, was coded as "US"). As with many guidelines, there were some cases in which exceptions to this general approach needed to be made in order for the coding to be appropriate. The NSI team made these exceptions on a case by case basis based on the available information and the best judgment of the coders.

---

[8] In our initial capture of information from the various organization websites, the NSI team identified 13 different types of information, all of which contained several sub-categories. The 13 broad categories include: numeric data, forecasts, GIS data, performance assessments, policy experts, portals, qualitative analysis, quantitative analysis, resource collections, subject matter experts, tools, and wiki.

Tailoring US-DiGIA to Inform Gray Zone Challenges: Creation of Gray Zone Coding Scheme

Following identification of the broader list of information assets, the NSI team reviewed and coded each information topic for its potential utility for gray zone analysis, producing a down-selected list of 732 gray zone relevant information topics.

The NSI team then grouped these gray zone relevant information topics into 148 broader information elements, which were in turn rolled up into 31 information classes. Finally, these classes were coded to the four gray zone dimensions derived from the gray zone definition (see main body of report for full definition): action, actor, international rules and norms, and US interests and capabilities. A full list of the information dimensions, classes, and elements can be found on the "Gray Zone Coding Scheme" tab of the US-DiGIA Directory. This additional coding can be used to further guide selection and location of specific information assets.

One of the challenges of linking information elements to information classes is that these categories are not mutually exclusive. In other words, some information elements (e.g., cyber espionage) are relevant to more than one gray zone class (e.g., political influence and destabilization, economic coercion and sabotage, corporate espionage, and cyber attacks). In order to ensure that the user would not miss relevant information within the US-DiGIA Directory, the NSI team allows for this multiple coding.

The US-DiGIA Directory itself—found on the "US-DiGIA Directory" tab of the Excel document, enables search either by information topic (more specific) or gray zone element (more general). However, the user can also utilize the "Gray Zone Coding Scheme" tab as a resource to more generally explore the available categories of information (including class or dimension) or to refine initial search terms (see "US-DiGIA User Guide" tab of the US-DiGIA Directory for instructions on how to use this resource).