

```
public abstract class AbstractA implements A {  
    protected abstract void doStuff(X x);  
    protected abstract void doMoreStuff(X x, Y y);  
  
    public void execute() {  
        X x = getX();  
        doStuff(x);  
        Y y = getY();  
        doMoreStuff(x, y);  
  
        // getX(), getY(), etc...  
    }  
}
```

```
#define ASM_VMX_VMREAD_RDX_RAX ".byte D  
static always_inline unsigned long vmcs_  
{  
    unsigned long value;  
  
    asm volatile ( __ex_clear(ASM_VMX_V  
: "=a"(value) : "d"
```

SERIES
Number 7

INTELLIGENCE AFTER NEXT

MAKING CURRENT INTELLIGENCE CURRENT

By Hassan Terry

How We Deliver Current Intelligence to Policymakers and Warfighters Must Change

The Intelligence Community (IC) is responsible for rapidly informing leadership of noteworthy changes in the operational environment to enable national-level policy decision through all levels of military operations. Today's current intelligence, however, is neither current nor of sufficient quality to support its intended purpose. Significant inadequacies exist within our current intelligence processes and capabilities that present major impediments to operational effectiveness.

To address these concerns, the IC must modernize current intelligence to achieve new standards for timeliness and accuracy – or risk surrendering an ever-elusive advantage to our adversaries and competitors. Modernizing intelligence production processes and capabilities will improve and enhance the ability to fight and win wars. This includes evolving the way we deliver critical, time-sensitive information to the decision-maker. Moreover, transforming our intelligence processes and capabilities will also provide our analysts and leadership with the ability to harness intelligence data to capitalize on strategic and tactical opportunities currently beyond their reach. Delivering increased analysis and reporting results means the community must shed outdated practices, procedures, models, and systems and leverage emerging innovations and non-traditional concepts of operation.

THE ANALYTICAL WORKFORCE IS HINDERED, AND IN MANY INSTANCES PRECLUDED, FROM ACHIEVING QUALITY AND CURRENCY DUE TO LEGACY PROCESSES, SYSTEMS, AND APPROACHES THAT MUST BE DISCARDED OR SIGNIFICANTLY REFINED

Part of this change will require the community to adopt new technologies – from automation to Artificial Intelligence (AI), Machine Learning (ML), and other significant capability enhancements. However, success or failure will depend on strong senior leader advocacy and support, widely adopted and enforced guidelines, assured compatibility, and a steadfast commitment to avoiding incompatible and antiquated systems, non-vetted schemas, and systems and tools that are non-interoperable. When combined, these steps will make us more competitive and posture our leaders to gain the decision advantage. This advantage is attainable if we can make our current intelligence truly current.

Introduction

Intelligence is considered a critical piece of the decision-making process within any operational environment. Whether at a tactical, operational, or strategic level, in times of peace or war, intelligence helps inform the existence of an adversary, their intent, level of risk, and associated environment. It provides information that will help leaders appraise their options to neutralize potential threats and analyze the associated effects of their actions. For intelligence to serve its purpose, the level of quality associated with intelligence must be excellent. As defined in intelligence doctrine, this level of quality is met by satisfying several important attributes, including whether it is anticipatory, accurate, usable, relevant, objective and timely.

These attributes of intelligence excellence provide insight into the level of complexity associated with intelligence production and delivery. They also offer an understanding of both the significance intelligence plays in the decision-making process and the imperative for intelligence *quality and currency* – two characteristics that are difficult to achieve simultaneously.

Current intelligence is a fundamental product for enabling a Commander's daily decision-making process. According to doctrine, the Commander receives current intelligence consisting of accurate, detailed, and varied content for recent or ongoing activities to inform and enable the decision-making process. The analytical workforce is hindered, and in many instances precluded, from achieving quality and currency due to legacy processes, systems, and approaches that must be discarded or significantly refined.

The Current Problem

Joint Publication 2.0 – Joint Intelligence defines current intelligence as “support for ongoing operations. It involves integrating time-sensitive, all-source intelligence and information into concise, objective reporting on the current situation in a particular area.”

Present-day, the more common version of current intelligence is delivered at the Combatant Command level and is customarily provided in the form of what most commonly is known as the Daily Briefing, Morning Briefing, or Current Intelligence Briefing. This briefing is generally given to the Commander and staff at the beginning of the day or shift changeover and normally in the form of a Microsoft PowerPoint presentation. A large team of analysts, collaborating over a 12-hour production cycle, is responsible for developing this presentation. Such a rote, manual, and laborious process can often produce the following outcomes:

- Latent delivery of intelligence, 8 to 12+ hours *post facto* that does not result in the most current intelligence available.
- A production process far removed from real-time events that calls into question whether the intelligence is truly anticipatory, accurate, usable, relevant, or objective.
- Static production of discrete moments in time conveyed via a flat-file medium (i.e., PowerPoint, PDF, Word, etc.) that rarely enables the Commander's decision-making process and does not satisfy the concept of availability to the Commander and associated community that may benefit from such a report in a time of globally shared adversary concern.

Given the data and technology available today, it is surprising that intelligence tradecraft is so far behind the private sector and not able to truly provide current intelligence to our consumers.

Understanding the tradecraft and associated processes provides insights into this issue.

Current Intelligence Analytical Tradecraft

The demands for a level of excellence as the standard for intelligence quality, paired with consistent currency demand, place a heavy burden on the analyst. Accurate and fast are often opposing elements of current intelligence tradecraft. Confidence in analytic assumptions and quality in product form takes time to achieve and requires additional analytic steps and review. The passing of time is the enemy of currency.

Ensuring analytic accuracy often requires the aggregation and integration of information from various sources, each with different timelines and exploitation requirements. With aggregation and integration of information critical to accuracy, content gathering is the first time-consuming activity in the process. Upon completion of the information gathering, the analysis of the content comes via assessment. Assessment is the critical piece to developing an accurate report and often requires unique expertise provided by different personnel, so collaboration becomes an added time-consuming portion of the process. Finally, the drafting of an intelligence report, associated peer reviews and quality control add to the production time requirement, especially if the information will be delivered to a senior consumer. Pre-set briefing times may delay the delivery of the information further as it waits to be shared at a scheduled intelligence update.

To make intelligence current, the tradecraft of analysis, production, and dissemination must evolve to enable the timely sharing of critical time-sensitive intelligence within moments of its production.

The Current Intelligence Production Process

With analytic tradecraft comes the associated production process and the issues that impede the ability to execute at sufficient speed, scale, and fidelity. The customary 12-hour current intelligence production process consists of:

- **Gathering Information:** Analysts transition through various networks to gather the required information to support the current intelligence production efforts. Impediments to this process include:
 - A lack of adequate cross domain solutions (CDS), creating the need to scour through various domains for content.
 - A lack of an alerting capability, creating the need for analysts to spend substantial amounts of time searching for relevant content.
 - A reliance by analysts on utilizing content from authoritative data providers rather than more current content from other sources to avoid the risk of inaccuracies.
- **Viewing Information:** Analysts utilize various applications to support the appropriate viewing of the gathered content. Impediments to this process include:
 - A lack of data standardization, requiring analysts to utilize multiple stove-piped applications to view gathered content.
 - A lack of centralized tools, placing the need to transition through different applications to meet the full breadth of analysts' functional needs.
- **Assessing Information:** Analysts often will transition the viewable content into applications that provide the ability to assess the associated

content and begin correlating relevant content to generate their assessments. Impediments to this process include:

- A lack of data standardization, requiring analysts to utilize multiple stove-piped applications to assess gathered content.
- A lack of centralized tools, placing the need to transition through different applications to meet the full breadth of the analysts' functional needs.
- **Reviewing Process:** Analysts conduct the appropriate level of initial assessment reviews to ensure the suitable accuracy level for proposed reporting. Impediments to this process include:
 - A lack of interoperable, integrated systems, and workflows, creating a time-consuming manual review process between those responsible for review and approval.
- **Reporting Process:** Analysts finalize the reporting process by ensuring the reviewed assessment is placed into a format that can be presented to the Commander in a way that meets their needs and within the appropriate timeline for a presentation. Impediments to this process include:
 - Lack of a centralized tool to assist in gathering, assessing, reviewing, and reporting requires analysts to utilize an additional tool to support the production process's final step. The primary tool used in the community is Microsoft PowerPoint.
 - Use of Microsoft PowerPoint results in the assessment being in a static form not discoverable to the greater community that could benefit from the associated content. Those that benefit are normally those that were in attendance for the presentation.

Understanding both the issues faced in the demands of analytical tradecraft and the production process, the question becomes: What improvements can be made to make current intelligence truly current?

How Can We Make Current Intelligence - Current?

While much of the analytical tradecraft and production process likely will remain the same, the focus should be on transforming it by leveraging emerging technologies. Additionally, we must seek a change in policy, data, and capability standards to further our evolution towards truly current intelligence.

Institute Standards and Policy Guidelines

It is essential to highlight that at the core of IC issues is the lack of standardization of both the data and tools used in the environment. The lack of data standardization affects information discovery. It drives the need for our analysts to leverage various tools to view and assess the information required to produce current intelligence. The lack of designated tools to support specific user functions forces the users to transition through various stove-piped tools to support their analytical tradecraft. The combination of non-standardized data and tools also creates an environment that is neither interoperable nor adequate to support accurate and timely intelligence reporting.

To mitigate this issue, the IC should mandate data and tools standards that will place the associated user community in an environment that is both common and interoperable.

Recommended Actions

- Conduct a community assessment to determine data types and usage against specific intelligence production functions (e.g., users) related to current intelligence. The assessment includes data used for assessing the desired end state of how the data can be visualized and correlated for reporting. The results will help provide the specific data ontology requirements and drive the data standardization to help interoperability and improve content.
- Conduct a community assessment of the specific users associated with current intelligence production to determine their specific functional needs. The assessment results will be used to designate the specific set of tools that will be utilized to support the user functions. The designation of the specific tools and their interaction will help ensure a foundation for interoperability and seamless workflow transition between systems and tools without the unnecessary overlap in functions that can often result in reporting inaccuracies. Additionally, the assignment of specific tools to designated service providers will alleviate the overspending of funding to support disparate and duplicative tools that further exacerbate the problems in our ability to have interoperability.
- Designate community information *producers*, *contributors*, and *consumers* to ensure the appropriate lines of delineation between the authoritative information and intelligence sources: the *contributors* that improve the fidelity of *producer* reporting, and the tools that will *consume* the data for the appropriate usage. This designation, coupled with how data has been standardized, also will lay the foundation of our ability to leverage AI and ML in a way that will not result in an oversaturation of un-vetted, un-used information.

Improve How We Gather Information

Recommended Actions

- Standardize data and tools so that users will not be required to transition between a series of applications that provide data gathering and initial viewing.
- Provide information centralization via CDS capability that is standardized and mandated across the IC. The CDS will leverage data standardization and tools to deliver the required information to a centralized location to support the full process of current intelligence production globally.
- Build *Alert Me* functions into intelligence production tools to help transition analysts away from the need to accomplish manual discovery and alert them on content related to their specified intelligence requirements. This *Alert Me* function can be further enabled by leveraging AI and ML to fuse and correlate massive amounts of disparate information to provide the analyst with content related to their designated *Alert Me* settings. It will be important that content delivered via AI/ML technology will provide analysts with a confidence rating associated with the information fidelity.

Improve How We Assess Information

Recommended Actions

- Establish a collaborative workflow to provide analysts with the ability to participate in real-time assessments of the centralized information related to their specific functional areas.
- Create an interactive assessment environment that allows analysts to view community

assessments, both internal and external, to the Command where shared intelligence requirements exist. AI/ML will help this collaborative assessment by assigning a confidence rating associated with the analysts' assessment.

Improve How We Review Information

Recommended Actions

- Establish collaborative workflows to allow peer reviews of assessments per the specific level of authority and function. This collaborative workflow will be a constant process accomplished throughout the analysts' work period and enable real-time, continuous peer reviews – at an enterprise level (where applicable).
- Leverage AI and ML to provide an automated confidence rating to support the final review. Where applicable, the rating should correlate to those enterprise-level areas where there are shared intelligence requirements across the global community.

Improve How We Report Information

While reporting will need to improve to a more dynamic system, it will always be imperative to have a *snapshot in time* about what an intelligence assessment was in a temporal capacity – this is for future usage with other intelligence production activities.

Recommended Actions

- Implement a consistent process of correlating intelligence reporting requirements at an enterprise and global level. Implementation will require the ongoing assessment of intelligence requirements across the community to

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determine a common theme and the appropriate traceability level. Functional models can be created that tools will leverage to support globally integrated intelligence assessments and reviews.

- Provide the ability, through designated and standardized tools, to create a snapshot of an approved current intelligence assessment that will be exported per leadership's defined specification for consumption. Provide leadership with specific template options tailored to meet their specific reporting requirements and usability needs. The approved current intelligence assessment will be a snapshot in time with the associated confidence rating. Archive content as discoverable objects based on a standardized ontology. The archived content will provide improved information discoverability for future use in support of other intelligence production efforts (e.g., Estimative and Warning Intelligence).
- Leverage the *Alert Me* function for intelligence consumers when there is a critical update to their specified intelligence requirements.
- Create a *change over time* function for

intelligence products that depicts the present state of the related intelligence reporting and the level of confidence rating associated with its present status. Present status can be viewed throughout the day and based on the designated view of the consumer. AI/ML will assist in the “change over time” and confidence rating. The collaborative workflow for review and assessment will be continuous to provide the decision-makers with truly current intelligence.

Conclusion

Today’s current intelligence process is inadequate to support the time-critical and large scale demands of this new era of Great Power Competition. While new technology exists to support a revised production process, it is equally important to establish the appropriate policies and standards to lay the foundation for our ability to leverage such emerging capabilities and establish global interoperability across the intelligence production community.

With appropriate standards and processes in place, supported by a suite of tools common across the IC, emerging technologies can then be applied to ensure discoveries of potential importance to our operational consumers are shared as quickly as possible. The application of capabilities such as the *Alert Me* function across a set of user-defined needs will move what may be perishable data rapidly to the decision-maker while it is still of operational significance. These same processes will enable the production of traditional *snapshot in time* intelligence updates to remain important to the daily staff planning process. Through this evolution, we can meet the needs of the full range of our consumers and restore currency to the construct of current intelligence.

ABOUT THE AUTHOR

Hassan “H” Terry is a MITRE Lead Systems Engineer and military intelligence subject matter expert. He is a former U.S. Air Force all-source intelligence analyst and mission planner, with more than 26 years of experience in the intelligence community. He currently serves as the European Command’s Joint Intelligence Directorate task lead, focusing on capability gap assessments and strategic projects.

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