International Conference on
Exercises, Gaming, and Simulations
for Intelligence and National Security

Georgetown University
Washington, DC
March 24-25, 2015
Welcome!

Welcome to the International Conference on Exercises, Gaming and Simulations for Intelligence and National Security in Washington, DC. This bi-national event is being held in-conjunction between the Center for Intelligence Services and Democratic Systems at Rey Juan Carlos University (Madrid, Spain) and the School of Continuing Studies at Georgetown University. However, the topics discussed go beyond these two countries, because national security is the concern of every country.

Over the last decade, the training and education of national security has become more complex from a pedagogical standpoint. The ever-changing technological landscape of engagement between the teacher and the student has created various challenges and opportunities. Students do not care, nor should they, be content to sit and listen in a classroom. The classroom should be a window to engagement that establishes and applies knowledge.

This conference is an attempt to explore the past, current and future of interactive learning for intelligence and national security. We hope you enjoy the conference.

Dr. Jan Goldman, Georgetown University (U.S.)
Dr. Ruben Arcos Martín, Rey Juan Carlos University (Spain)

¡Bienvenido!

Bienvenidos a la Conferencia Internacional sobre Ejercicios, Juegos y Simulaciones para Inteligencia y Seguridad Nacional en Washington, DC. Este evento binacional se llevará a cabo en conjunto entre la Cátedra Servicios de Inteligencia y Sistemas Democráticos de la Universidad Rey Juan Carlos (Madrid, España) y la Escuela de Estudios Continuos de la Universidad de Georgetown. Sin embargo, los temas tratados van más allá de estos dos países, ya que la seguridad nacional es una preocupación de todo país.

Durante la última década, la formación y la educación de la seguridad nacional se ha vuelto más compleja desde el punto de vista pedagógico. El entorno tecnológico de interacción entre el profesor y el estudiante en cambio constante ha creado varios retos y oportunidades. Los estudiantes ni se conforman, ni deben conformarse, con sentarse y escuchar en las aulas. El aula debe ser una ventana abierta a la participación que establece y aplica el conocimiento.

Esta conferencia persigue explorar el pasado, presente y futuro de aprendizaje interactivo para inteligencia y seguridad nacional. Esperamos que disfrute de la conferencia.

Dr. Rubén Arcos Martín, Universidad Rey Juan Carlos (España)
Dr. Jan Goldman, de la Universidad de Georgetown (EE.UU.)
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Schedule

Tuesday, March 24: Panels

08:30 to 09:00  Registration
09:00 to 09:10  Welcome - Auditorium
09:10 to 09:30  Keynote Speakers - Auditorium
09:30 to 10:30  Presentations - Auditorium
10:30 to 10:50  BREAK-EXPO
10:50 to 12:30  Panel - Auditorium
12:30 to 01:45  LUNCH – No Host
01:45 to 02:30  Panel - Auditorium
02:40 to 04:00  Panel – Auditorium
04:10 to 05:15  Panel - Auditorium

Wednesday, March 25: Presentations

09:00 to 09:10  Welcome
09:10 to 09:40  Presentation – Auditorium
09:40 to 10:00  BREAK
10:00 to 10:50  Presentations – Two Locations
11:00 to 11:50  Presentations – Two Locations
12:00 to 01:30  LUNCH – No Host
01:30 to 02:45  Presentations – Two Locations
02:45 to 04:15  Presentations – Auditorium
04:15 to 04:30  Closing Remarks - Auditorium
04:30 to 06:00  Spy Museum
Tuesday, March 24

8:30 to 9:00  Registration, lobby on the first floor.

9:00 to 9:10  Welcome, Jan Goldman and Ruben Arcos Martin

9:10 to 9:20  Strengthening Intelligence in Times of Crisis, Elena Sanchez Blanco.
At a time when the long-term has been irreversibly shortened and information flows non-stop, Intelligence Services face the challenge of providing decision-makers with accurate analysis in a timely fashion. Consequently, should the intelligence community innovate or go back to basics to strengthen our capabilities?

W e need to reexamine how we are organized and how we operate with other agencies.

9:20 to 9:30  Setting the Tone for International Engagement, Jose Miguel Palacios.
Intelligence practitioners and academics have a symbiotic relation. Without contributions from practitioners, intelligence studies lose contact with the real world. But intelligence practice finds in academia the rigor, the innovative spirit it badly needs if it wants to advance. If it wants to be a profession, rather than a craft. And practitioners find in simulations, designed and frequently administered by academics, the way of practicing new techniques, particular cases that can be rarely found in real life. The way of advancing towards the dream of transforming intelligence into a high reliability system.

9:30 to 10:00  Technology for Intelligence Simulation and Gaming Computational Simulation in Intelligence Analysis, Edward Waltz.
This presentation will describe the roles for the use of computational simulations in intelligence analysis, including evidence marshaling, causal explanation, prediction and anticipation, and effects analysis to support collection and operations. The use of explicit, dynamic and immersive simulations provides the analyst with a unique means to conduct analytic experiments to consider evidence, relationships, causal mechanisms, and effects. This presentation explains the categories of simulations that may be applied, the analytic tradecraft for their application, as well as the benefits and limitations of their use. The potential of current simulation technology is illustrated, and the potential technology advances that will further benefit intelligence analysis are enumerated.

10:00 to 10:30  Educating Competitive Intelligence Clients and Consumers, Nan Bulger
You have just landed a new job as the Head of Competitive and Market Intelligence for Company A and you have been asked to set up the first CI/MI intelligence function for the organization. Simulating your entrance into an organization and desire to show immediate ROI, you soon realize the need to step through certain challenges in setting this up and making it viable in a reasonable amount of time. Challenges: No one in the company knows what CI is but the CEO read an article about how intelligence can help the C-Suite make decisions so he has asked the “unmotivated and non-believer” Chief Marketing Officer to hire the function.
The organization is set up a specific way so that you need to understand the following:
- The hierarchies, the players, the requirements and the expectations.
- Paths of least resistance and battle maps to understand who makes decisions and how decisions are made.
- You will need to design a function and a level of effort to deliver outputs.
- You will need to develop and disseminate outputs that manifest accuracy, insight and deliver recommendations that drive strategic growth patterns.
- Develop an ROI mechanism to prove viability

Let the games begin!
Set up the intelligence function and determine why this function works for this company; provide a set of ROI metric based deliverables that support “key topics’ that will drive company A growth and success both in the long term and the short term; that is all the direction you have. What do you do?

10:30 to 10:50 BREAK – EXPO

1050 to 12:30 Panel: Gaming and Modeling Before a Crisis to Prevent Harried Thought During a Crisis, Kenneth Kligge (moderator)
This program brings together senior officials from across the interagency community for a series of tabletop exercises looking at potential national security crises, most of which have the possibility to occur “just over the horizon.”

Use of Gaming and Exercise as Part of an Engagement Strategy, Hyong Lee
The old axiom that “we train as we fight” drives the need to conduct games and exercises with our treaty allies and key partners around the world. U.S. strategy and national policy relies on the maximum use of coalition operations across the spectrum of conflict. A key second order effect is the impact of using games and exercises to improve relations between the U.S. and the host nation(s) and lay the groundwork for more willing partners for mutual security. This presentation will draw upon from almost twenty years of gaming experience and a number of bilateral and multilateral exercises at the combatant command and national security policy level

Understanding Post-Transition Political Trajectories through Modeling Pre-Transition Regime and Opposition Interaction, Katrina Dusek
The collapse of communism in Eastern Europe and the USSR took the world by surprise. While the political environment of the region had long been the subject of intense study, analysis and prediction, the events of 1989 caught scholars unaware. The transitions were surprising in three major ways: they were mostly peaceful, they occurred in rapid succession and, although they were interdependent, each was a consequence of the dynamic interaction between regimes and oppositions. Using case studies from the region with known pre-transition regime-opposition interaction and their known post-transition political trajectories to the present day, this presentation will investigate pre-transition actor relationships to propose pre-transition environments and interaction outcomes most suitable for long-term political stability.

Gaming the Nexus between Intelligence and Policy, Timothy Wilkie
Gaming has potential as a means to study the use and application of indicators and warnings, as well as the nexus of intelligence and policy. By providing a means to contextualize hypothetical intelligence in a decision-making context, games can be tools for considering relevance and timeliness. Events conducted by the Center for Applied
Strategic Learning at National Defense University provide examples of gaming's unique suitability for addressing specific perception and coordination issues.

12:30 to 1:45    Lunch – No Host

1:45 to 2:30    Panel: Simulating Intelligence Operations for the Public

Developing The Spy Immersive Experience, Amanda Ohlke and Jacqueline Eyl
Operation Spy at the International Spy Museum offers guests the chance to assume the role of a U.S. intelligence officer on an intrigue-filled international mission. This hour-long experience combines live-action, video, themed environments, special effects, and hands-on activities to create a series of reality-based challenges where guests “think, feel, and act” like real intelligence officers in the field. Guests don’t read about spies, they ARE the spies. This groundbreaking spy adventure is based on actual cases drawn from intelligence files. The plot is set in a far corner of the world, where U.S. intelligence has received an anonymous tip that a top-secret device has gone missing. The Museum’s goal is to reach guests on an intellectual and emotional level by placing them in a situation that mirrors a real intelligence experience.

Developing the Cuban Missile Crisis Simulation
This simulation places students in the role of CIA intelligence analysts in October 1962. By analyzing declassified primary documents and U-2 photographs, students advise President Kennedy of the "ground truth" at each stage of the crisis. Can sources be trusted? What is REALLY going on? The outcome is in their hands. The Key Concepts and Skills addressed are: History: Cold War/Cuban Missile Crisis; Government: how intelligence is interpreted and informs policy decisions; Interpreting primary (declassified) documents; Critical thinking and decision-making skills.

Global Positioning System (GPS) -based Spy Games in the City
Spy in the City are GPS-based interactive experiences for individuals and groups. Participants get a spy’s eye view of DC through a series of exciting, self-guided outdoor missions. Equipped with a Galaxy Tablet, players recover messages from sources and moles, along with documents, codes, audio intercepts, and photos for analysis. Spy in the City was crafted in collaboration with former intelligence officers. It delivers unique missions inspired by real espionage cases and even gets players to consider the ethics of spying. The exercise can range from one to three hours.

2:40 to 4:00    Panel: Introducing Intelligence Analysis Using Games

Synthesizing Theory into Game Design, Roger Mason. Everyone has an opinion on what is needed to improve intelligence analysis. The answer is developing experiential learning platforms which incorporate learning theory and specific approaches to teaching intelligence analysis.

Games as Experiential Learning Platforms, Peter Perla. Games provide active learners the opportunity of experience a unique domain such as intelligence analysis. Experiential learning platforms can provide the synthetic experience that forms the foundation from critical problem solving.
Modeling Systems and Effects, Joseph Miranda. A successful intelligence game requires the identification of specific effects, variables and systems unique to that domain. These factors must be converted in practical models as part of the game design.

4:00 to 5:15 Panel: United States Institute of Peace, Daryn Cambridge, Dominic Kiraly, Jim Ruf. This panel provides an in-depth look at how the United States Institute of Peace (USIP) incorporates gaming and simulations into both their online courses and their civil-military trainings. USIP is an independent, nonpartisan institution established and funded by Congress to increase the nation's capacity to manage international conflict without violence. In 2014 USIP launched the Global Campus – a suite of instructor-led and self-paced online trainings that prepare individuals around the world to prevent and transform violent conflict. The Global Campus approach to online learning guides participants through a three step process that involves: (1) immersing learners into fictional scenarios the present them with a specific peace building challenge, (2) guiding participants through an interactive online training that covers the knowledge and skills needed to overcome this challenge, and (3) asking learners to apply what they have learned by making decisions, and posing solutions to navigate the challenge with success. USIP’s civil-military team will share the Inter-organizational Tabletop Exercise (ITX) - a new exercise framework they developed in partnership with the Joint Staff J7.

Wednesday, March 25

09:00 to 09:10 Welcome Remarks. Jan Goldman and Ruben Arcos

09:10 to 09:40 Panel: Only for the kids’ eyes: bringing institutions out from the shadows or the need for a simulation/gaming program in Spain

Looking at Primary and Secondary Education Through the Lenses of Intelligence Culture, Fernando Velasco
The academic outreach policies implemented through CNI’s Intelligence culture initiative since 2003 have helped to provide information and understanding to society. However, there is not an educational program under the Spanish Intelligence Culture initiative aimed at children. The proposal makes the case for a specific program on intelligence culture targeted to primary and secondary education.

Experiencing the Tradecraft: Designing the Intelligence Learning Experience with Simulations and Games, Rubén Arcos
Active learning methodologies like simulations and games have been recently introduced in academic programs on intelligence analysis in Spain. The presentation provides examples and explains the design and use of some of these methodologies for enhancing the learning experience of the students in specific areas of interest related to analysis and communication of intelligence. Finally, some lines of action for a potential program targeted to younger audiences are also suggested, stressing the importance of using games and simulations as educational strategies.

09:40 to 10:00 BREAK
10:00 to 10:50

**Presentation Room A:**

**Challenges of Demonstrating Cyber Attacks for Health Care Training,**
Jean Stanford
The health care domain presents a number of challenges for cyber security training. For example, many of the facilities are open to the public, so there is no way to block physical access to those lacking badges. Further, many health care providers are not employed by the health care institution (they have contracts to provide health care services or they are independent clinicians provided with admitting privileges). The training has to make rational sense to the clinical staff and has to provide sufficient rationale to ensure compliance. By focusing on training that demonstrates how and why things can go wrong as well as how the individual can benefit from the knowledge and not just the organization the lessons become relevant and relatable.

For management level staff, a series of demonstrations where actual attacks were performed in real time using the organizations own systems. For a more general audience, a program focusing on how to protect themselves in their personal lives against cyber threats offers a great opportunity to demonstrate that many of the same techniques that keep them safe will also keep the organization safe.

**Timeless Lessons Learned from Historic Innovations in Exercises, Gaming, and Simulations – and their Applicability to Contemporary Challenges,** Paul Byron Pattak
We sometimes think we have just invented new things, when in fact we have refined, remixed, adapted, or simply digitized ideas and products previous generations may have developed decades, centuries, or even millennia ago. The urgent requirements of statecraft drove innovation and creativity in the evolution of exercises, gaming, and simulations by savvy leaders and strategists who understood that even a modest replication of real-world concepts in a defined setting would provide a good environment in which to role play, experiment, learn from mistakes, test boundaries, and expand horizons. Throughout history, exercises ranging from tabletops to full field provided increasing levels of realism to planning, preparation, and rehearsing for conflict. The games of Chess and Go were developed in India and Asia respectively as learning mechanisms for the arts of strategy and war. Sand tables and miniatures were used by the Roman Army to model terrains and plan engagements. This presentation will take historic examples of innovation and treat them as case studies to show how they can be applied to the contemporary challenges of individuals and organizations. This is especially those who may not think the lessons learned from exercises, gaming, and simulations apply to them – yet may have learned more than they realize from participating in fire drills, playing popular board games, and taking driver’s education courses.

**Presentation Room B:**

**Cyber-Attack and Ethics Simulations,** Pablo G. Molina
This presentation will use publicly-available simulations about a moral dilemma, a credit card heist, a cyber-attack on the United States, and the harassment of a college professor to teach about information security and ethics in technology management. Using role-playing and multimedia materials, students learn how to investigate a cyber-
attack and how to respond to it. They explore the technical, legal and social ramifications of their actions. They learn from their mistakes and their successes without negative consequences.

**Intelligence Analysis Capstone Projects**, Stephan Marrin

For James Madison University’s Intelligence Analysis major, a year-long capstone sequence is required for all graduating seniors. The capstone sequence layers an applied project on top of an educational (conceptual and contextual) foundation. This year, the applied project will be done as a kind of “analytic simulation” with real-world sponsors as proxy decision-makers, giving the students questions, initial assistance in setting the focus and scope, and providing feedback on delivery. This presentation will describe the design and implementation process of this analytic simulation, and evaluate its strengths and weaknesses.

11:00 to 11:50

**Room A**


Structured analytic techniques have a long history in the intelligence community. Cybersecurity shares many of the analytic challenges of the broader intelligence domain, but structured analytic techniques have not traditionally been taught in cyber security academic programs. In this paper, we report on our work to teach structured analytic techniques in a graduate course on cyber security analysis using a combination of lecture, written assignments, and role playing desktop exercises. Each technique is introduced in lecture, then students apply the technique to a classic intelligence domain problem as a guided homework assignment, then we apply the technique to a cyber-security problem in a live classroom role playing exercise. This presentation will report on the initial structure, exercises, and results of this approach delivered in 2013, a revised version delivered in 2014, and plans for a subsequent revision to be delivered in 2015.

**Induction Game and Intelligence Education**, William F. Lawhead

The “Induction Game”, as the name suggests, is a game designed to explore the nature of inductive reasoning and to illustrate the principles and pitfalls of induction that we face in intelligence analysis. This game provides a basic understanding of hypothesis testing and pattern analysis through a practical exercise of these skills. However, because there are some obvious similarities between scientific reasoning and intelligence analysis, I have begun to explore its effectiveness in courses in intelligence analysis at various levels. The game is simple, yet engaging. In most games it is important that everyone understand the rules before the game begins. In the Induction Game, however, the process is reversed. The job of the participants is to figure out the rule by examining the pattern of the cards that conform to the rule as well as the pattern of the cards in each reject column. In playing the game, the participants are emulating some of the basic thought processes of an analyst trying to uncover patterns in an opponent’s behavior or of a cryptologist trying to break a code.
Simulating Stress and Crisis within an Intelligence Driven Scenario, Omid Townsend. Intelligence is often misconstrued and taken to be a catch all term for students. Many struggle to even define what intelligence actually is. Students often confuse collection, analysis, dissemination and consumption of intelligence as intelligence itself. On Nov 8-9 2014, Stratcon LLC teamed up with Young Professionals in Foreign Policy to put on a crisis entitled “Mideast Tensions at an All-Time High”. These two days were meant to simulate an impending missile attack by Iran on Israel after Israel re-occupied the Gaza Strip. There were nine countries within the scenario and each country had at least four officers: diplomatic, military, intelligence and economic. The parameters of the scenario were set in place by giving each country (UK, US, Iran, Israel, Russia, Syria, Turkey, Saudi Arabia, China) competing objectives and different assets to pursue those objectives. We utilized technology to record all actions and military maneuvers. Each time a country wanted to take action, they would need to submit a form through the internet in our closed network environment. The value of intelligence and how the participants used it became quickly realized after several rounds. This presentation is meant to discuss and analyze how educators can generate and convey the role of intelligence in a high stress environment through simulation.

Comparing the Utility of On-line Learning Technologies, Randy Pherson
Both academia and the intelligence community have shown growing interest in using distance learning platforms for education and training. Adoption of these platforms has grown substantially in recent years, powered by the expansion of home access to high-speed internet. Academia sees these platforms as valuable online delivery vehicles for reaching large numbers of students. Business and government interest has also expanded in recent years, in part because of the desire to avoid paying travel costs. Despite the use of such systems for well over a decade, understanding of the relative value of different online learning systems remains immature; it is unclear which system is best for transferring knowledge versus teaching critical skills. This paper compares and contrasts the use of avatar-based virtual environments such as TH!NK Live™ with Adobe.connect, Blackboard™, Canvas, Moodle, and Computer-Based Training (CBT) systems.

12:00 to 01:30 LUNCH – No Host
01:30 to 02:20 Presentation

Simulations for intelligence and security education and training: serious gaming & how to create visionary practitioners and policy makers, Cristina Ivan
This presentation provides a practical based approach to interactive education techniques and promote an integrated learning environment model in which students can experience the tradecraft of early detection, understanding and countering of security threats via group immersion in challenging, gradually unfolding complex scenarios. It mainly draws on the lessons learnt by designing and applying a model of integrated learning environment in two distinct learning contexts: first, the simulation exercise (serious gaming) has been used in the training of a group of undergraduate students in intelligence studies.
The serious gaming exercise was designed as a virtual framework in which participants could use knowledge acquired during the program and their own skills as policy makers and strategists, to create new approaches to energy security in a challenging setting. Given this overall landscape, the main task of the participants in the exercise was to document the state of the art in the imaginary country of Caesaria and the Black Sea region, to understand challenges and opportunities and design public policy solutions to enhance energy security in the mentioned country. Public policy solutions were outlined in general terms, in the form of: a vision, a limited set of goals and correlated smart objectives that best express participants’ outlook on the future development of the country.

Potential in Nonrepresentational Concrete Tabletop Exercises for Analysts, Noel Hendrickson

A semester long experimental course will be explored in which five specific prominent “Eurogames” could be tied to a specific cognitive skill, by having students repeatedly play games while trying to employ the (previously learned) methods connected to those skills. In particular, five games will be described (to include 7 Wonders, Puerto Rico, Stone Age, Alhambra, Macao) as well as the cognitive methods that were hoped students would hone while playing them (such as hypothesis testing, causal analysis, systems thinking, scenario development, and strategy development). Additional discussion will focus on what seemed to work and what seemed not to work, as well as suggestions and arguments as to why playing Eurogames can contribute to the development of core cognitive skills among analysts.

Room B

“The Body in the Bag”: A scenario-based approach for developing the links between analysis, assessment and reporting, Julian Richards

Much of the work on using simulations and gaming in support of intelligence and national security endeavors can focus on analysis, assessment or reporting as somewhat discrete elements of the process. In some ways this is not surprising, since all are complex and multi-faceted elements of the Intelligence Cycle, on which a great deal of training and familiarization is necessary before the analyst feels comfortable. In this paper, a scenario-based approach is presented which ties the three elements closely together in the same exercise, and which relates them to the real intelligence process, taking the UK’s Joint Intelligence Committee (JIC) machinery as a model. Discussion of the JIC and its process, including its benefits and pitfalls, has the supplementary benefit for students of thinking about how the Intelligence Cycle performs when it interfaces with a real intelligence system. In this way, knowledge of intelligence machinery is supplemented with a challenging exercise that develops analysis, assessment and reporting skills in the shape of a whole, dynamic process.

Composite Signatures Analyst Learning Tool: Supporting the Analyst with Scenario-Based Methodology Training, Benjamin Bell

Analysts across the Intelligence Community (IC), including Department of Defense (DOD) intelligence components, face rapid growth in the volume and levels of fidelity of data to be transformed into intelligence. At the same time, the IC is experiencing a reduction of skilled senior analysts due to attrition and budget compression. At a time when all-source, multi-int, and open-source analysis are becoming critical to combating
state-sponsored terrorism, transnational threats, and hostile proto-states, any knowledge, skills or experience gaps must be seriously examined and remedied.

These challenges are familiar but new influences are exacerbating these gaps. Open source information has grown dramatically, driven by traditional news outlets offering digital editions and nontraditional conduits such as blogs and social media. Open-source intelligence (OSINT) has assumed greater importance as conflict zones are often in regions that lack traditional infrastructure and communications networks. In summary, analysts are facing unprecedented volumes of information and an acute requirement for advanced analytical techniques. A systemic improvement that could address these challenges is a new approach to training that promotes the effective use of composite signatures as a tool for intelligence analysis. The Composite Signatures Analyst Learning Tool (CSALT) applies scenario-based, technology-enriched training to create web-accessible interactive training scenarios.

02:50 to 4:15 Predicting Migratory Patterns Through Gamification and Simulation, Melonie K. Richey
This presentation will draw on a body of work surrounding a simulation method that I developed to predict migratory patterns. Additionally, through gamification, both the simulation method and the topic of analysis (in this case, the conflict in Central African Republic), is introduced to students within the intelligence classroom. Through multiple implementations of this simulation method (e.g. case studies in Syria, Central African Republic and Nigeria) it is possible to introduce broader conclusions on the use of simulations and gamification within intelligence pedagogy.

Simulation-Based Analysis and Training (SimBAT), Timothy J. Smith
The Office of Naval Intelligence’s (ONI) Simulation-Based Analysis and Training (SimBAT) activity is intended to develop and institutionalize advanced methodology in intelligence analysis and production. SimBAT has both an analytic and a training component. SimBAT-Analysis (‘SimBAT-A’) involves computational simulation for the purposes of intelligence analysis and production at the strategic, operational, and tactical levels of war. SimBAT-Training (‘SimBAT-T’) lays the groundwork for SimBAT-A by familiarizing analysts with the basic principles of simulation modeling and analysis and exposing them to the power of discovery inherent in the methodology. SimBAT-T courses consist of basic familiarization briefs, structured analytic intelligence and operations-planning exercises, and a capstone ‘tabletop training exercise’ (wargame). The wargame employs one or more manual, commercial off-the-shelf (COTS) models and is implemented using classic Naval War College wargaming practices.

Leveraging and Scaling Scenario-based Training Simulations for Better Intelligence Analysis, Jacqueline Barbieri
There are several key factors that impact the applied practice of intelligence analysis, including: technology, methodology, data, mission and culture. Legacy approaches to training intelligence analysts tend to be stove piped in each of these areas, linear in nature, and do not adequately exercise analysts in maintaining performance under pressure. This presentation examines lessons learned from the experience of running a multi-agency experiment to train intelligence analysts that leveraged a live exercise to simulate a realistic, deployed environment and present trainees with multi-faceted, non-linear challenges in a “safe” setting. It will explore the key components of the scenario-
based, live “capstone” approach borrowed from the military community for this experiment, their costs and benefits. Next, it describes the philosophy that informed the execution of the experiment, and its impact on the trainee experience. Finally, it concludes with a discussion on a potential path forward for scaling this approach to training without degrading the value of the experience for trainees.

04:15 to 04:30 Closing Remarks
04:30 to 6:00 SPY Museum

Contributors

Rubén Arcos is professor of communication sciences at Rey Juan Carlos University (Madrid, Spain). He is deputy director at the Centre for Intelligence Services and Democratic Systems, and coordinator of the MA Program in Intelligence Analysis. He is also founder and Chair of Spain Chapter of Strategic and Competitive Intelligence Professionals; recent publishing includes *The Art of Intelligence: Simulations, Exercises, and Games* and he is deputy editor of *Inteligencia y seguridad* (Journal of Intelligence).

Jacqueline Barbieri is the co-founder and CEO of Whitespace Solutions, LLC. She has over a decade of experience developing and implementing ground-breaking collection and analytic approaches ranging from threat emulation to qualitative modeling of adversary behavior based on technical and open source intelligence. Barbieri has managed advanced analytical projects and capability research and development efforts for government customers across the Intelligence Community, Law Enforcement organizations and the Department of Defense. Most recently, Jackie led several Activity-Based Intelligence (ABI) projects, and a team of expert practitioners and software engineers in this space. She launched an effort that developed and executed live ABI experiment scenarios at the premier venue for ABI training and tradecraft development.

Benjamin Bell is a principal and founder with Aqru Research and Technology which addresses the use of advanced technologies for decision support, training and education across a spectrum of applications, including K-12, higher education, military and national security training. He is an associate editor for *IEEE Transactions on Human-Machine Systems*. Dr. Bell holds a Ph.D. from Northwestern University.

Elena Sánchez Blanco has been working at the Spanish Intelligence Service (CNI, Centro Nacional de Inteligencia) for over twenty-six years and has extensive experience in counter-terrorism, counter-intelligence, the Middle East and the Maghreb. From 2008 to 2012, she was the Secretary General of CNI and from 2006 to 2008, she was Assistant Director of Intelligence. Sánchez Blanco holds graduate degrees in Translation from the Universidad Complutense de Madrid and in The Contemporary Maghreb from Universidad Nacional de Educación a Distancia.
Daryn Cambridge is a Senior Program Officer at the United States Institute of Peace (USIP) where he leads curriculum development and educational design for USIP’s Global Campus - a suite of online courses exploring conflict management and peace building themes and skills. Daryn is also a peace educator in residence and adjunct professor at American University in Washington, DC, where he teaches courses on education for international development, peace pedagogy, and nonviolent action.

Katrina N. Dusek joined the Center for Applied Strategic Learning at the National Defense University (NDU) in July of 2011. As a Research Analyst, she researches, develops and facilitates games and tabletop exercises in support of military education. Most recently, she has served as an Intelligence Analyst for NATO Maritime Command Headquarters and in the Defense Intelligence Agency’s Afghanistan-Pakistan Task Force. She received a Master of Arts in Russian and East European Studies from the University of North Carolina at Chapel Hill in 2008.

Jacqueline Eyl is International Spy Museum’s Youth Education Director and holds an M.A.T. in Museum Education and a BA in archaeology from Emory University. For the past eleven years at the International Spy Museum, Ms. Eyl has developed the Museum’s KidSpy® series of public programming in which young people learn about various aspects of intelligence and espionage and participate in simulated mission-based activities. She also creates in-service trainings for teachers that use intelligence studies as a lens for classroom curriculum. She has written and developed seven curriculum publications that provide educators with tools and lesson plans to integrate.

Jan Goldman has been teaching intelligence courses for more than 30 years. He is the editor of a series of intelligence textbooks, and an internationally recognized expert on ethics and intelligence. He is the editor of two books released this year, The Central Intelligence Agency: An Encyclopedia of Covert Operations, Intelligence Gathering, and Spies, and War on Terror Encyclopedia: From the Rise of Al Qaeda to 9/11 and Beyond.

Noel Hendrickson is Associate Professor and Director of the Intelligence Analysis Program at James Madison University. Hendrickson earned a Ph.D. in Philosophy from the University of Wisconsin in 2002. He has written articles on action theory and critical thinking for intelligence analysis, and is the author of Counterfactual Reasoning: A Basic Guide for Analysts, Strategists, and Decision-Maker; a co-author of Handbook of Critical Thinking; and a co-author of the Digital Logic and Critical Thinking (Pearson Prentice Hall, forthcoming).

Jim Jones is an Associate Professor in the Computer Forensics program at George Mason University. He has been a cyber-security practitioner and researcher for almost 20 years. He has performed network and system vulnerability and penetration tests, led a cyber-incident response team, conducted digital forensics investigations, and taught university courses. His research interests are focused on digital artifact extraction, analysis, and manipulation, offensive cyber deception in adversarial environments, and analytic techniques for cyber security. Jones holds a PhD from George Mason University in Computational Sciences and Informatics.
Dominic Kiraly is Director for Educational Technology at the United States Institute of Peace, where he founded and leads USIP’s Global Campus, which prepares individuals worldwide to prevent and transform violent conflict. In this role, he leads a multidisciplinary team that creates innovative training tools with global accessibility. Kiraly is the co-founder and former vice president of the Washington, DC-based consulting company TechChange (The Institute for Technology and Social Change).

Kenneth Kligge is the Director of the Wargaming Division at the Center for Applied Strategic Learning and responsible for all aspects of development and delivery of experiential learning events. He directs and leads the externally funded team responsible for the Office of the Secretary of Defense National Security Policy Analysis Forum program.

William Lawhead retired from the University of Mississippi in 2012 after forty-one years of teaching philosophy and seven years as Chair of the Department of Philosophy and Religion. He has served on the advisory board of the University of Mississippi’s Center for Intelligence and Security Studies. He is the author of Western philosophy, The Voyage of Discovery, 4th ed. (Cengage, 2015) and The Philosophical Journey, 6th ed. (McGraw-Hill, 2014). Dr. Lawhead received his Ph.D. in philosophy from the University of Texas, Austin.

Hyong M. Lee is a Senior Policy Analyst with the Center for Applied Strategic Learning (CASL). He joined National Defense University in January 2002 when he started working at the National Strategic Gaming Center, the prior incarnation of CASL. As part of the CASL, he supports exercise efforts for the various components of National Defense University, the Joint Staff, combatant commanders, and CASL outreach audiences.

Stephen Marrin is an associate professor in the Department of Integrated Science and Technology at James Madison University, teaching in its Intelligence Analysis program. He was an analyst with the Central Intelligence Agency and then the US Government Accountability Office. He holds a PhD from the University of Virginia and he is Chair of the Intelligence Studies Section of the International Studies Association.

Roger Mason is co-founder of LECMgt a strategic analysis and simulation design company in Porter Ranch, California. Dr. Mason has designed simulations for a variety of clients from federally funded research and development centers, educational institutions to local and regional governments and a contributing author to Modern War magazine.

Joseph Miranda is editor of Modern War magazine. Mr. Miranda has designed over 200 commercial wargames and simulations. He has designed simulations for DARPA and the US Department of Defense. He is a prolific author and professional speaker on the topics of simulation design. Miranda served as an officer with the US Army and served as an instructor in counter terrorism and intelligence at the John F. Kennedy Special Warfare Center at Ft. Bragg.

Pablo Molina is the Executive Director of the International Applied Ethics and Technology Association and the Chief Information Officer at the Association of American Law Schools. He is an adjunct professor at Georgetown University, where he
teaches graduate courses in ethics and technology management, managing information security and Internet governance. He holds a doctorate degree from Georgetown University on the adoption of technology in higher education and an MBA from Saint Louis University. In 2013 and 2014, he was named one of the most influential Hispanics in information technology.

Amanda A. Ohlke is the Adult Education Director at the International Spy Museum in Washington, DC. She specializes in developing innovative programming using espionage-related subject matter such as “Spy in the City™, GPS-based interactive missions drawn from real spy cases; “Spy City Tours™,” an interactive bus tour of spy-related sites in DC featuring a spy tradecraft-based mission; “and “Surveillance Workshops” taught in the streets and historic buildings of DC. Her paper, “Developing the Spy in the City Game at the International Spy Museum,” received an Honorable Mention, in the AAM Brooking Paper Competition on Creativity in Museums, in 2012. She has a Master of Arts and Teaching in Museum Education from The George Washington University.

Paul Byron Pattak has extensive experience as a designer, planner, controller, evaluator, role player, and game director in the planning, preparation, and administration of war games and exercises for Department of Homeland Security, Federal Emergency Management Agency, Department of Energy, and the military and intelligence communities. His areas of focus are on cyber security, disaster response, continuity of government, continuity of operations, nuclear weapons accident response, and contingency planning for senior leadership.

Peter Perla has over 30 years of experience in operations research and analysis, organizational assessment, and systems simulation and gaming for government and commercial clients. He is the author of The Art of Wargaming, (Naval institute Press).

Randolph H. Pherson, Chief Executive Officer (CEO) of Globalytica, LLC, teaches advanced analytic techniques and critical thinking and writing skills to analysts in both the government and the private sector. He collaborated in several books to include with Structured Analytic Techniques for Intelligence Analysis, in 2015. Mr. Pherson developed a suite of collaborative web-based software tools and is currently developing several other tools for challenging assumptions and generating alternative futures. In 2000, he completed a 28-year career in the Intelligence Community. He is the recipient of the Distinguished Intelligence Medal for his service as NIO for Latin America and the Distinguished Career Intelligence Medal.


Melonie K. Richey is currently the Deputy Director of the Virginia Operations National Intelligence Division at Camber Corporation. Formerly a research analyst within Mercyhurst University’s Tom Ridge School of Intelligence Studies and Information

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Science, Ms. Richey’s areas of analytic expertise are network analysis, geospatial modeling and interdisciplinary intelligence training.

Jim Ruf is a member of the U.S. Institute of Peace’s Academy for International Conflict Management and Peacebuilding team where he serves as a senior program officer for civilian – military affairs. In this capacity Jim represents the Institute to both military and civilian organization officials to reinforce USIP’s position of respected facilitator of civ-mil relations. Additionally, he creates and maintains efforts to develop relevant workshops, engagements, education and outreach programs. Jim joined USIP after successfully completing a 32 year assignment in the U.S. military.

Timothy J. Smith is a senior analyst and analytic methodologist with the Office of Naval Intelligence (ONI) and manager of ONI’s Simulation-Based Analysis and Training (SimBAT) activity. He commenced duty in the mid-1980s, as an operational intelligence watch officer tracking the activities of the then-Soviet Navy. He transferred over to ONI’s air warfare division, serving as an integration analyst during the Gulf War and after, for which he was awarded a Meritorious Civilian Service Award. In the past, Mr. Smith undertook an analytic modernization portfolio, developing methodology that has been recognized in three Galileo Award-winning papers. When not at work Mr. Smith runs an historical strategy gaming club and offers strategy game-based cognitive-development courses for children.

Jean Stanford has worked in the health care information technology field for over forty years. She has lead teams of developers and subject matter experts in assessing existing systems, analyzing requirements and building new systems in both the public and private sectors. Currently she is an adjunct instructor for the Graduate Program in Technology Management at Georgetown University (teaching health informatics and cyber security) and is manager partner of Del Rey Analytics (a health cyber security company).

Omid Townsend is the founder and CEO of Stratcon LLC, a cyber and intelligence education firm, and the lead instructor for the intelligence analysis program at the University of West Florida. He is currently a counter-narcotics investigator in the Office of Foreign Assets Central at the US Treasury. He is a reserve military intelligence officer that served in Kabul, Afghanistan in support of counter-corruption and counter-threat finance initiatives. He holds an MALS from Georgetown University.

Fernando Velasco is associate professor of Moral Philosophy and Director of the Centre for Intelligence Services and Democratic Systems at Rey Juan Carlos University. He is co-director of the MA Program in Intelligence Analysis. He is coeditor of Inteligencia y seguridad: Revista de análisis y prospectiva. He has published a number of articles in journals and is the coeditor of Intelligence as a Scientific Discipline, Cultura de Inteligencia (Intelligence Culture), 2012) and Estudios de Inteligencia (Intelligence Studies).

Edward Waltz is a Distinguished Member of the Technical Staff at Virginia Tech. He was the Chief Scientist for Intelligence at BAE Systems Technology Solutions over the last decade. He has led numerous hard target and counter denial & deception programs, applying computational modeling and simulation to understand target dynamics for the intelligence community and the U.S. Department of Defense. Previously he developed
data fusion technology and systems for airborne non-acoustic anti-submarine warfare, the Space Shuttle, and air combat target recognition.

**Tim Wilkie** is a Research Fellow in the Wargaming Division of the Center for Applied Strategic Learning (CASL) at National Defense University (NDU). His work as a game designer supports the educational mission of NDU's component schools. He initiated and continues to organize CASL's Roundtables on Innovation in Strategic Gaming and serves as co-chair of the Connections interdisciplinary wargaming conference. Previously he worked as a Foreign Service Officer for the Department of State. He is a graduate of the University of Chicago and The Fletcher School of Law and Diplomacy.
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For more information, contact
Dr. John M. Nomikos
Founding Editor, Journal of Mediterranean and Balkan Intelligence (JMBI)
Director, Research Institute for European and American Studies (RIEAS)
1, Kalavryton street, Alimos, 17456, Athens, Greece.
Emails: rieasinfo@gmail.com (work)

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This new and final edition is a follow-up to the author's Handbook of Warning Intelligence (Scarecrow Press, 2010), published after it was agreed that the last ten chapters would remain classified. These final ten chapters have recently been released by the government and complete the manuscript as it was originally intended to be published by the author in 1972.
The Central Intelligence Agency
Encyclopedia of Covert Operations, Intelligence Gathering, and Spies

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The practice of rendition began in the United States long before the events of September 11, 2001. This fascinating reference chronicles the individuals, operations, and events of the War on Terror around the world, exploring its causes and consequences through the lens of policy, doctrine, and tactics of combat. The War on Terror is more than a political movement to identify and prosecute terrorists ... it has become a cornerstone of economic and military importance. This campaign has shaped policy in the Middle East, prompted uprisings of Islamic fundamentalists against the West, and redefined the ideology of warfare. This single-volume encyclopedia provides readers with more than 200 engaging entries on the myriad events, key individuals, and organizations that have played a major role in the War on Terror. The A–Z entries define the policies and doctrines; describe the armies, battlefields, and weapons employed; and profile the figures whose actions and decisions set the course of history. The expert contributors decode military jargon for non-specialist readers and explain the unconventional tactics used in the War on Terror, shedding light on the reason behind the attacks, the political maneuvering of the leaders involved, and the internal conflicts and external clashes that drove terrorists to settle all over the world. The book also includes detailed essays on the impact of the September 11 attacks on U.S. foreign policy, presidential powers, and public opinion.

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