OFFICE OF THE DIRECTOR OF NATIONAL INTELLIGENCE

Janus Proposers' Day

Office of Smart Collection
Intelligence Advanced Research Projects Activity

LEADING INTELLIGENCE INTEGRATION

Dr. Mark Burge

June 13, 2013

Janus Proposers' Day Agenda

8:30am – 8:45am	***IARPA Overview and Remarks***	Dr. Edward Baranoski Smart Collection Office Director	NOAA Auditorium
8:45am – 9:45am	***Janus Program Overview***	Dr. Mark Burge Program Manager	
9:45am – 10:15am	**Doing Business with IARPA**	Mr. Tarek Abboushi IARPA Acquisition	
10:15 am – 10:45 am	***Janus Program Question & Answer Period***	Dr. Mark Burge Program Manager	
10:45am – 11:00 am	*B R E A K*	*Poster Session*	
11:00 am – 12:00 pm	*Proposers' 5-minute Capability Presentations* Attendees (**No Government**)	• **Virginia Tech – Prof. Devi Parikh** • **Stevens Inst. Of Technology – Prof. Gang Hua** • **George Mason University – Prof. Harry Wechsler** • **University of Arizona – Prof. Matthew Kupinski** • **Purdue University – Prof. Avi Kak**	NOAA Auditorium
12:00pm – 1:00 pm	*L U N C H – on your own*	*Poster Session*	
1:00 pm – 2:00 pm	*Proposers' 5-minute Capability Presentations* Attendees (**No Government**)	• **Rensselaer Polytechnic Institute – Prof. Qiang Ji** • **UC Berkeley – Prof. Avideh Zahkor** • **Vision Systems, Inc. – Dr. Daniel Crispell** • **University of Houston – Prof. Ioannis Kakadiaris** • **SRI – Dr. David Stoker** • **IBG – Mr. Danny Cho** • **Tensor Technologies – Dr. Alex Vasilescu**	NOAA Auditorium
2:00pm – 3:30pm	*Proposers' Networking and Teaming Discussions*	Attendees (**No Government**)	NOAA Auditorium

Disclaimer

- This presentation is provided solely for information and planning purposes
- The Proposers' Day does not constitute a formal solicitation for proposals or abstracts
- Nothing said at Proposers' Day changes the requirements set forth in a BAA
- A BAA supersedes anything presented or said by IARPA at the Proposers' Day

Goals of Proposers' Day

- Familiarize participants with IARPA's interest in Janus - Please ask questions & provide feedback; this is your chance to alter the course of events

- Foster discussion of complementary capabilities among potential program participants, AKA teaming. Take a chance, someone might have a missing piece of your puzzle

Questions

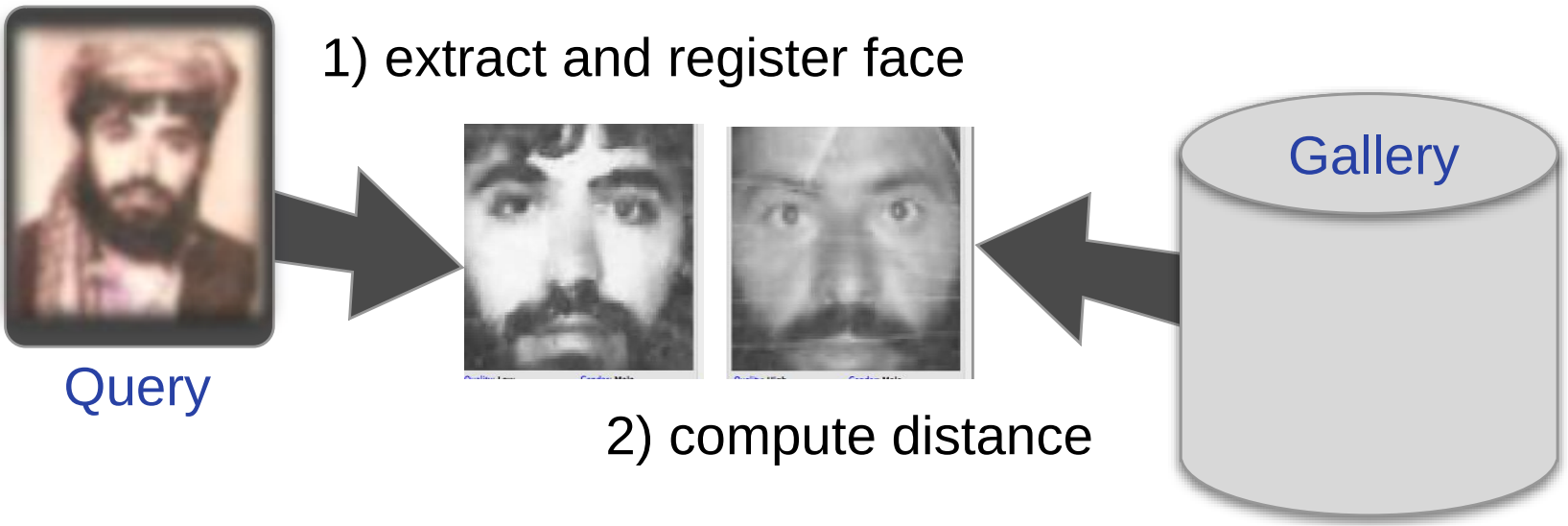
- During this session, questions should be recorded on note cards. They will then be answered for everyone's benefit during the Q&A period

- Once a BAA is released, questions can only be submitted to the email address provided in the BAA, and will only be answered in writing on the program website

IARPA's Janus program aims to dramatically improve the current performance of face recognition tools by fusing the rich spatial, temporal, and contextual information available from the multiple views captured by *"media in the wild."*

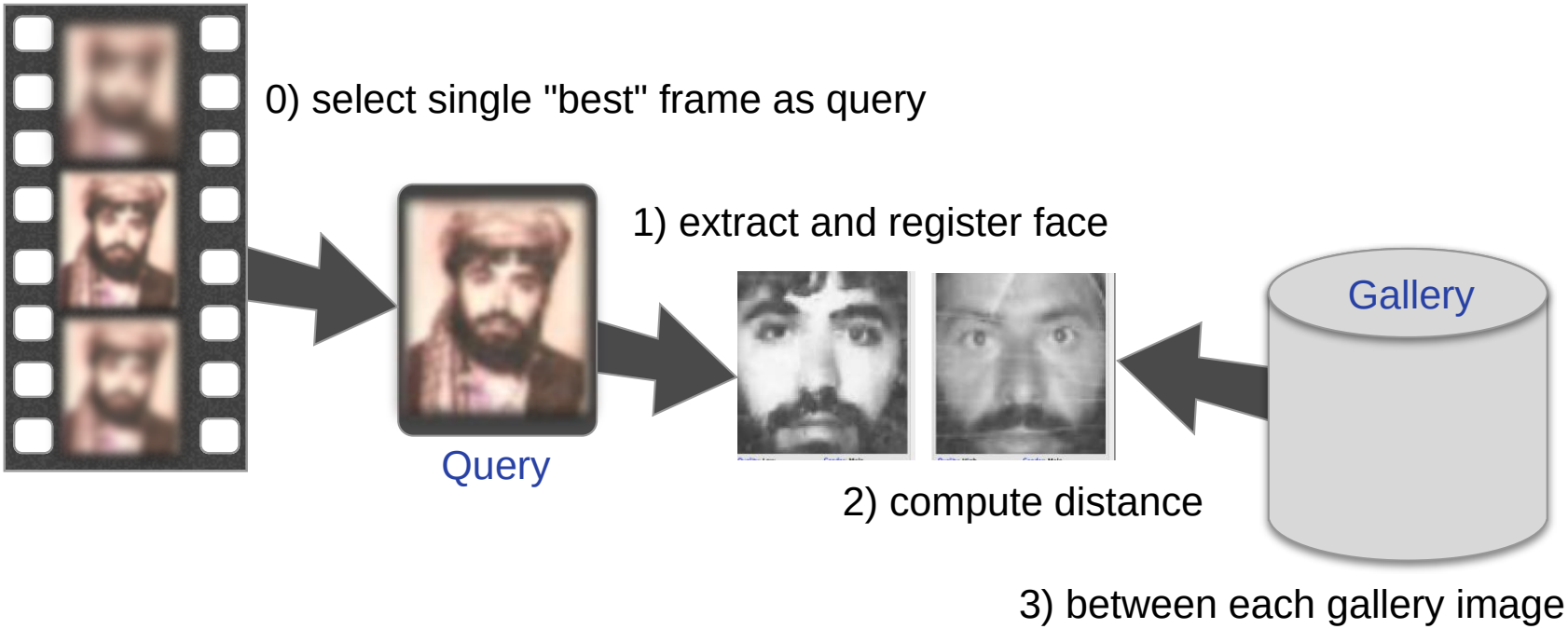
Still-to-Still Face Recognition Today

- Registration, registration, registration…
- Find the gallery mugshot which is "closest" to the mugshot image



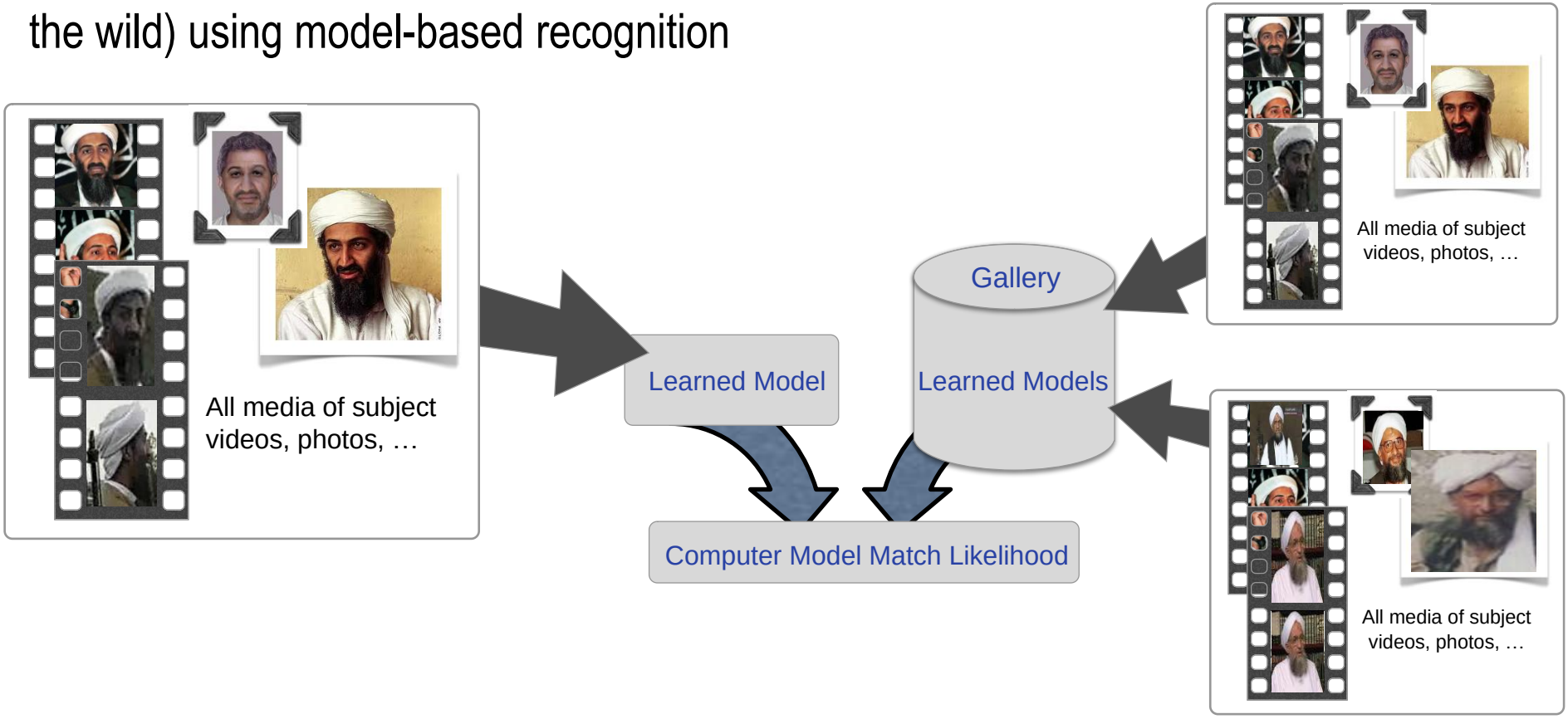
Video-to-Still Face Recognition Today

- State-of-the-art uses the “best” video frames and tries to match them to frontal mugshots in legacy galleries
- This only utilizes a small fraction of the video information available and disregards spatial, temporal, and contextual cues



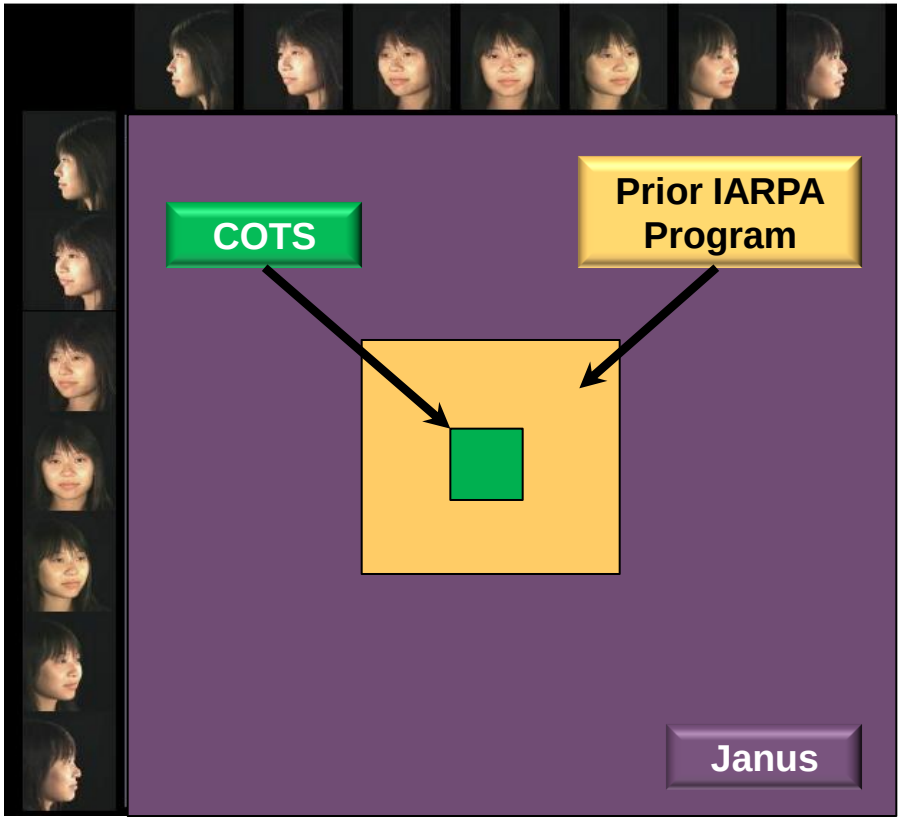
Janus Program Concept

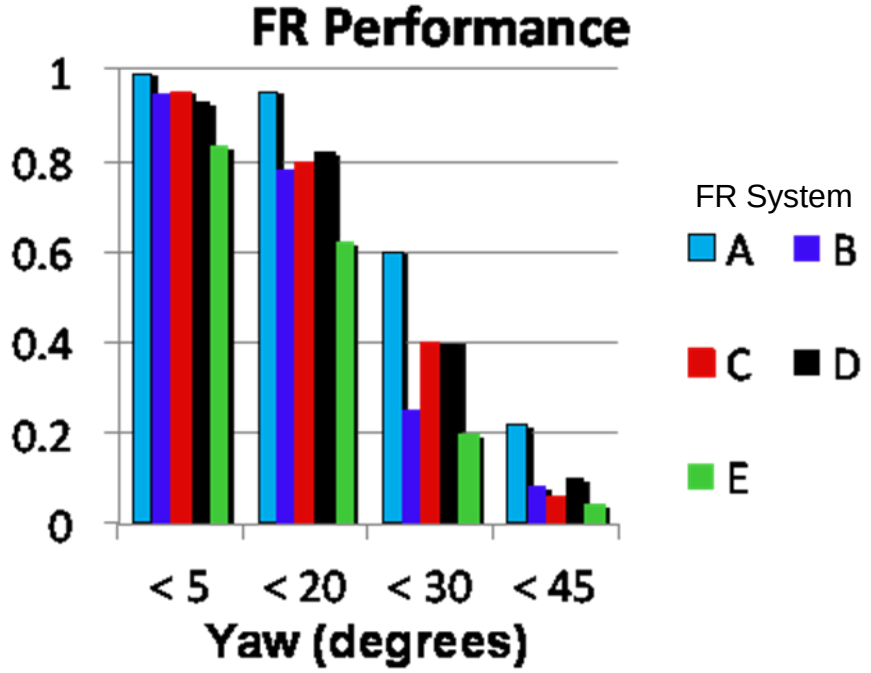
Advance the state-of-the-art in face recognition from using mugshots to working with operationally relevant image sources (i.e., media in the wild) using model-based recognition



Limitations of Current Approaches

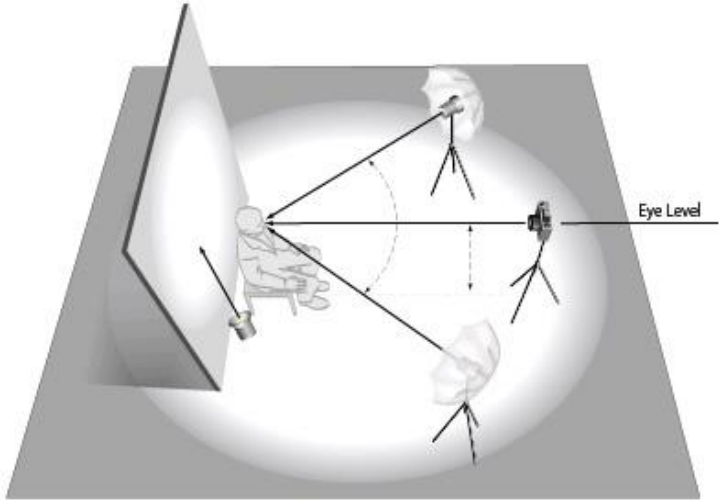
- Current face recognition algorithms perform best on well-posed, frontal facial photos taken for identification purposes
- Factors such as Aging, Pose, Illumination, and Expression (A-PIE) can not only decrease performance, they can cause catastrophic failure





Negative impact on performance (higher better) when changing just a single factor (yaw)
-- NIST Multiple Biometric Evaluation 2010

Engineered vs Unconstrained Collection



Engineered Collection

Unconstrained Collection

- State-of-the-art “solves” face recognition by carefully controlling the collection scenario (e.g., three-point lighting, 18% gray background, no smiling)
- Opportunities for carefully controlled collection are not always available

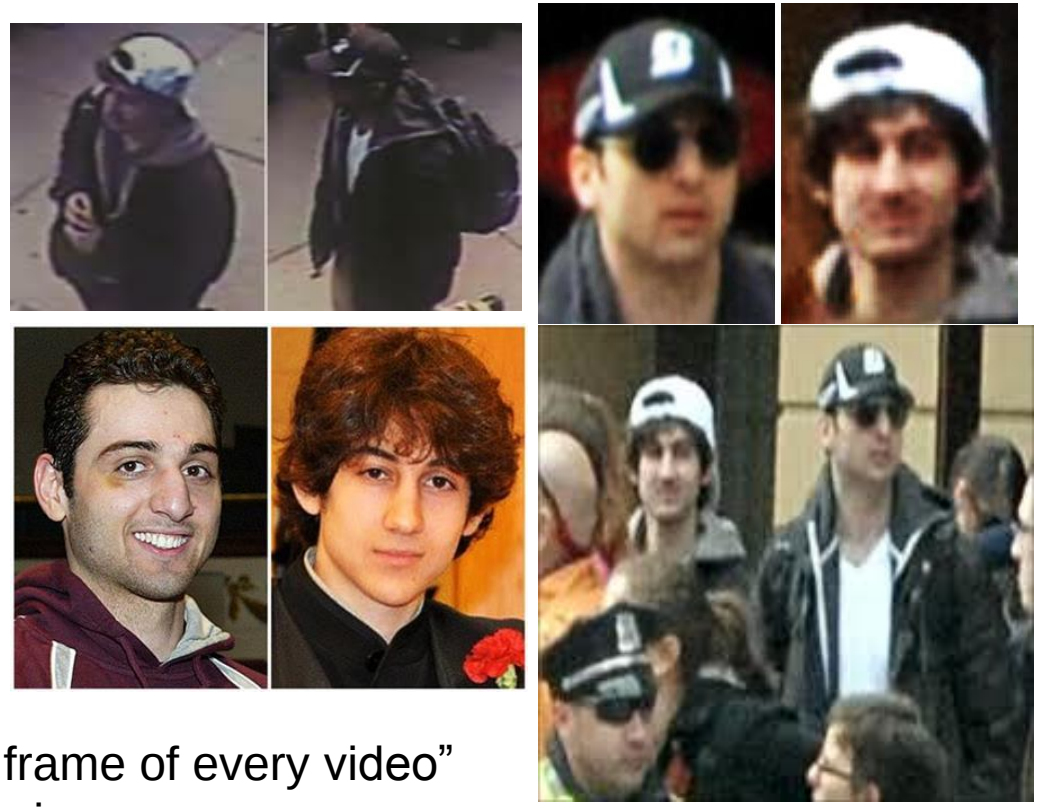
Janus focuses on recognition within unconstrained scenarios

Recent Events

Intelligence analysts often rely on facial images to assist in establishing the identity of an individual, but too often, just examining the sheer volume of possibly relevant images and videos can be daunting

"In the first successful U.S. terrorist attack of the smartphone era, … authorities face the daunting task of looking at thousands of images from phones, business- and government-owned surveillance cameras, and even runners' head cameras."

– Boston Marathon bombings: Investigators sifting through images, debris for clues, Washington Post, 04/16/13.



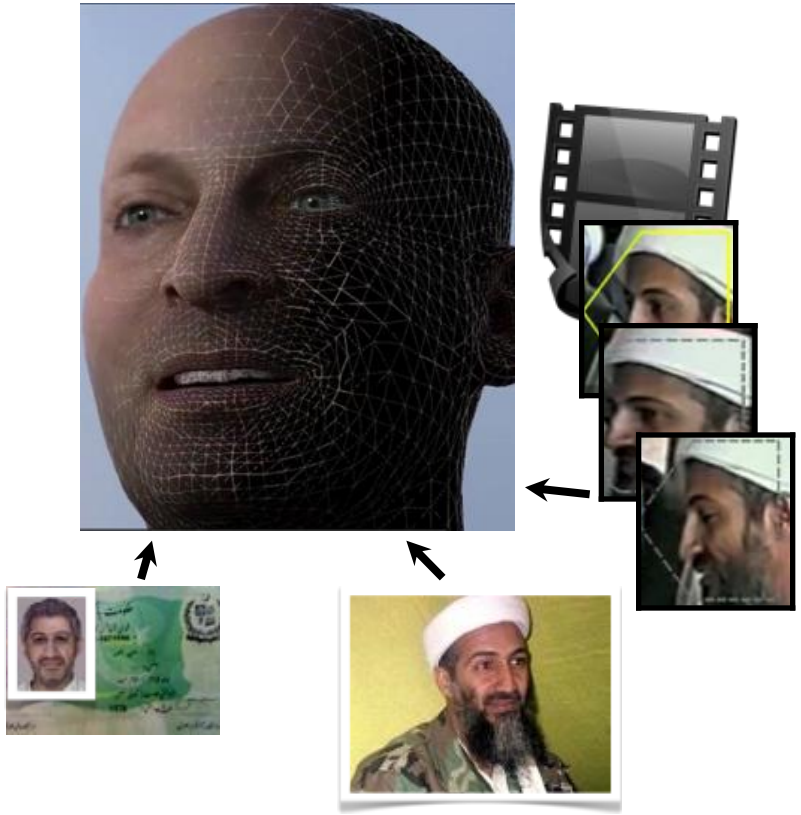
"It's our intention to go through every frame of every video"
– Boston Police Commissioner Ed Davis

Boston Marathon bombings: Investigators sifting through images, debris for clues, Washington Post, 04/16/13.

Image sources: FBI Boston, 04/18/13, FBI Boston, 04/19/13.

Janus Program Goals

- Move face recognition from intentional imagery (e.g., mugshots) to recognition from operationally relevant sources
- Develop a face recognition representation capable of leveraging arbitrarily large data sets per subject
- Demonstrate the representation can scale to support an arbitrarily large number of subjects
- Demonstrate that the representation is robust with respect to partial and incomplete data

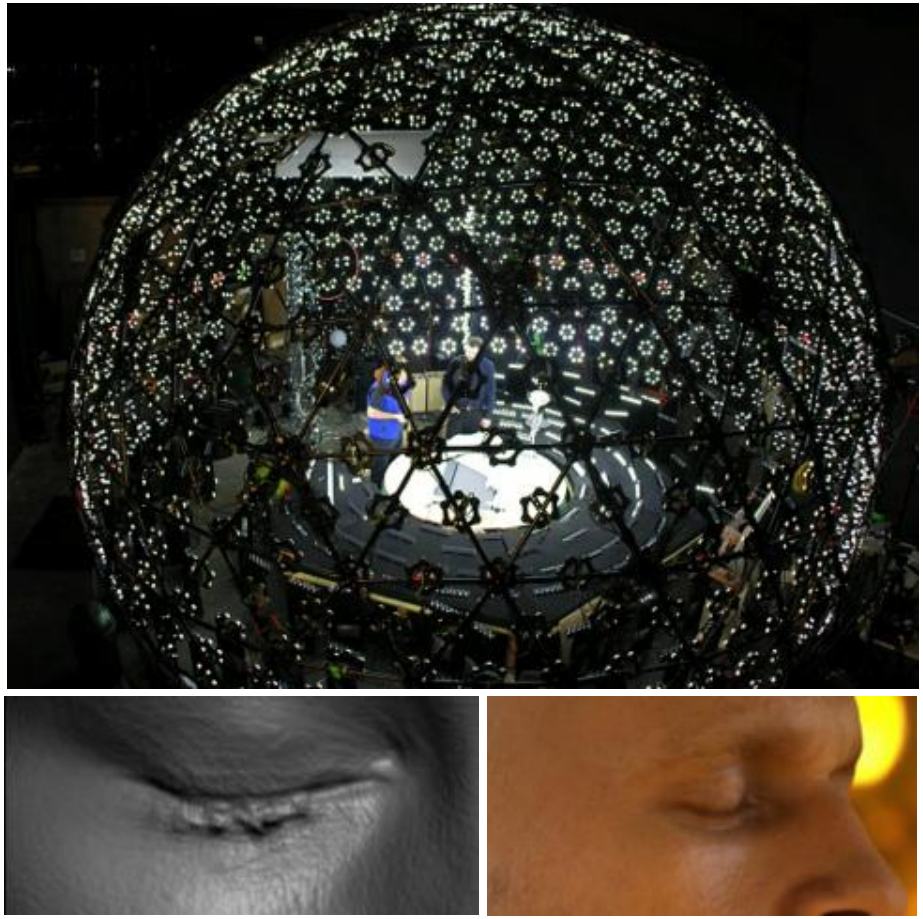


Why Could This Work?

- Robust face detection and tracking has been demonstrated in videos acquired under a wide range of less than ideal imaging conditions
  - The variety of faces we can detect is much greater than that which we can identify

- Instead of relying on a “single best frame approach” Janus representations will exploit all available imagery
  - Leverage all views when representing a subject
  - Use multiple views to tackle the challenges of A-PIE
  - Utilize domain specific knowledge (i.e., we are modeling a face)

Commercial Facial Capture



LightStage™ (top), Captured model (left), and Rendering (right)

Sophisticated Face Models are already created from constrained collections

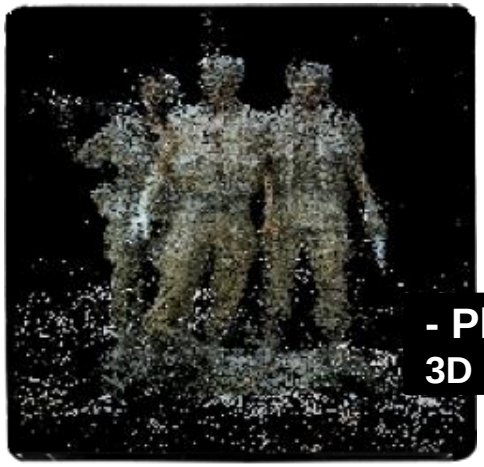
- Facial animation models can capture the texture and dynamics of the human face in millimeter detail
- These models can render novel photo-realistic variations of an individual's appearance
- LightStage™ utilizes over a hundred carefully positioned cameras to capture calibrated views, illumination conditions, and ranges of expression

Uncontrolled Capture

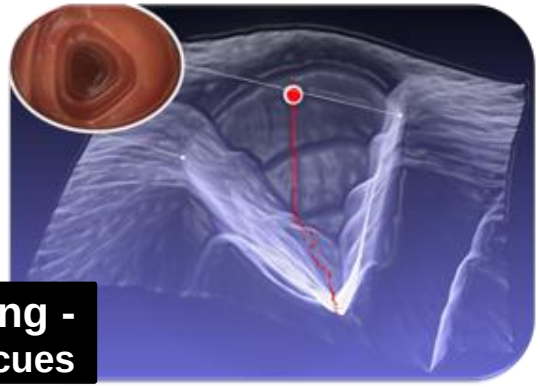
- Structure from motion
3D scenes from constraints

Motion capture -
using reference points

- Unconstrained collections build representations for static shapes
- Janus will extend this into 3D morphable shapes (e.g., faces)
- Can we algorithmically "register" the multiple views of a subject available in "media in the wild" to construct a face representation?



- Photosynth
3D point clouds from many stills

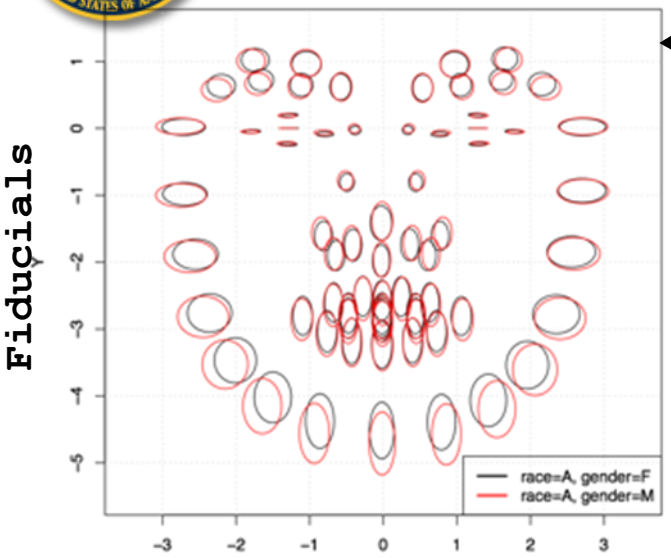


Shape from shading -
3D models from cues

What could such a representation look like?

- Janus' goals require development of novel representational models capable of capturing the **shape**, **texture**, and **dynamics** of a face

- Representations must exploit all the subject imagery available and address challenges of:
  - Aging
  - Pose
  - Illumination
  - Expression (A-PIE)



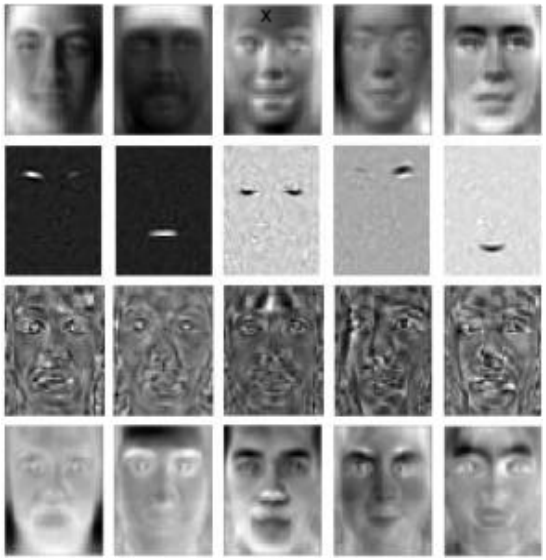
Biometrics

Computer Graphics

Oleg Alexander, et al, "The Digital Emily Project: Achieving a Photorealistic Digital Actor," ACM SIGGRAPH, 2009.

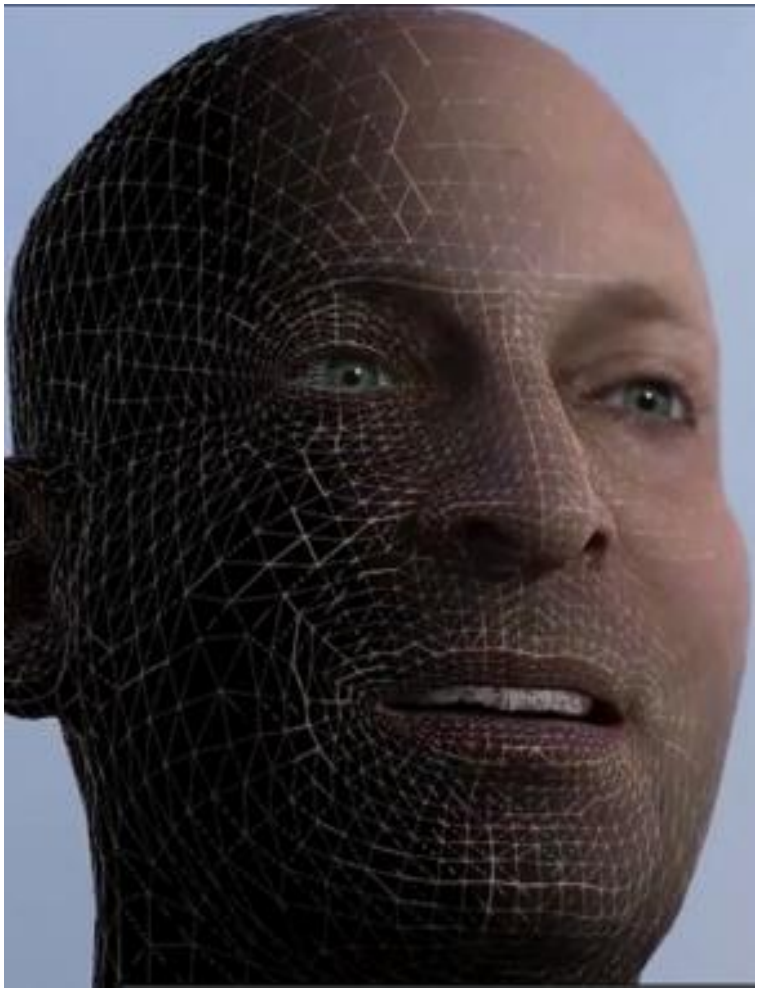
Facial Representations

- Those used in FR today are fundamentally different than those of CG facial animation
- CG readily goes from model to photorealistic rendered frames
- Janus seeks the challenging inverse; **real world frames to model.**



What could such a representation look like… A Face Model?

- A 3D head model is a useful conceptual visualization of a representation
- Don’t be limited
- Representations can be supported by fundamentally different underlying forms (e.g., SVMs, tensor faces)



What could such a representation look like… A Face Space?

- A sparse high dimensional space with facial variations distributed throughout it?
- Do not necessarily need a distinct model for each individual (i.e., in the sense that computer graphics does)
- Radically different representations to support the task of search

Images: "Face Recognition Performance: Role of Demographic Information," IEEE TIFS, 2012.

Representations should…

- Incorporate domain specific knowledge by explicitly modeling features like:
  - Cranial-facial musculature
  - Facial dynamics
  - Physical properties of skin, muscle, hair, etc.
- Take advantage of data driven models like:
  - Aging and weight gain
  - Common facial decorations
    (e.g., hairstyles, glasses, hats, scarves, beards)

Representation should support…

- Incorrect, ambiguous, and partial (e.g., occluded) data during both acquisition and query time
- Incremental addition of new evidence
- Graceful degradation as the “quality” and “coverage” of available subject imagery decreases
- Sub-linear search time
- Interactive, “analysts in the loop” search scenarios

Janus 4-year Schedule

- The four-year Janus program is divided into three conceptual phases:
  - 18-month phase will demonstrate that novel representational models capable of encoding the shape, texture, and dynamics of a face: 1) **exist**, 2) are **discriminative**, 3) and can be automatically created by exploiting **multiple subject views** with both complete and partial models.
  - The second 18-month phase will seek to better understand the impact of more challenging media (**down to a single snapshot**) on the creation and performance of such representations
  - The final 12-month phase will demonstrate the representations can support **variety and scale of real-world data**
- Size, range of variation, and “difficulty” of subject media sets will increase throughout the program

Objectives Common to All Phases (1 of 3)

- Given media sets consisting of videos and photos, build a representation of all subjects in the media
  - Build a repository of all subject representations and use that repository to perform matching (i.e., not the original media)
  - Support queries provided as a small set of video/stills (e.g., “Is this person in the repository?”)
  - Assess how many distinct people are in a media collection
- Support merging novel views, known through external evidence to be of the same individual, into existing representations

Objectives Common To All Phases (2 of 3)

- Solutions must support analysts who work with sparse information by addressing the uncertainties which arise when using incomplete, erroneous, and ambiguous data
- Show the impact of uncertainty on matching performance
  - How will uncertainty be communicated to the analyst?
  - "The System" will not decide; search results are provided to the analyst along with a way to understand why
- Provide both distance metric(s) and rule-based decisions (e.g., "a close match, but the nose is completely wrong")

Objectives Common To All Phases (3 of 3)

- Representation construction time is a function of the amount of imagery per subject
- Representation size per subject is independent of the amount of subject imagery processed (i.e., no bag-of-frames approaches)
- Query time is logarithmic in the number of subjects in the repository
- Representation will remain discriminative as the number of subjects grows to Janus goals
- Representation is consistent with subject media used to build it
- Ability to search using partial face images

Phase 1

- Data characterization
  - Expect tens of hours of video with face tracking data
  - Expect 500+ subjects with multiple clips per subject
- Evaluation scenarios could include:
  - Limited pose views (e.g., only one side of subject face)
  - Facial decorations (e.g., glasses, hats, scarves)
  - Imaging devices of varying quality
- Duration: 18 months

Phase 2

- Data characterization
  - Expect hundreds of hours of video without face tracking information
  - Expect 2000+ subjects with multiple clips per subject
- Evaluation scenarios could include
  - Aging, weight gain, self-shadowing, occlusion, etc.
- Difficulty of subject media sets will increase through both:
  - Increased quantity of subject imagery with greater variation
  - Decreased quantity of subject imagery, down to a single snapshot
- Model development CPU hours < 2 x PMI
  - Where PMI is Person-Minutes of Imagery
- Duration: 18 months

Phase 3

- Demonstrate system on large-scale, realistic data
  - Thousands of hours of video and photos
  - 10,000+ subjects with wide diversity of imagery per subject
- Model development CPU hours < 1 x PMI
- Duration: 12 months

Janus Metrics by Phase

	Figure of Merit	Phase 1	Phase 2	Phase 3
Modeling	Subjects	500+	2,000+	10,000+
	Hours of Media	Tens	Hundreds	Thousands
	Model Build Time	N/A	2 x PMI	1 x PMI
	Model Size	Held constant at 32 MB per subject across all phases		
Matching	Search Time	N/A	log(# of subjects)	log(# of subjects)
	True Accept Rate (TAR)	Held constant at 0.85 across all phases		
	False Accept Rate (FAR)	0.01	0.001	0.0001
	Correct Retrieval	95% within top 10	95% within top 10	95% within top 20

Model Build Time measured as CPU hours relative to PMI (Person-Minutes of Imagery)

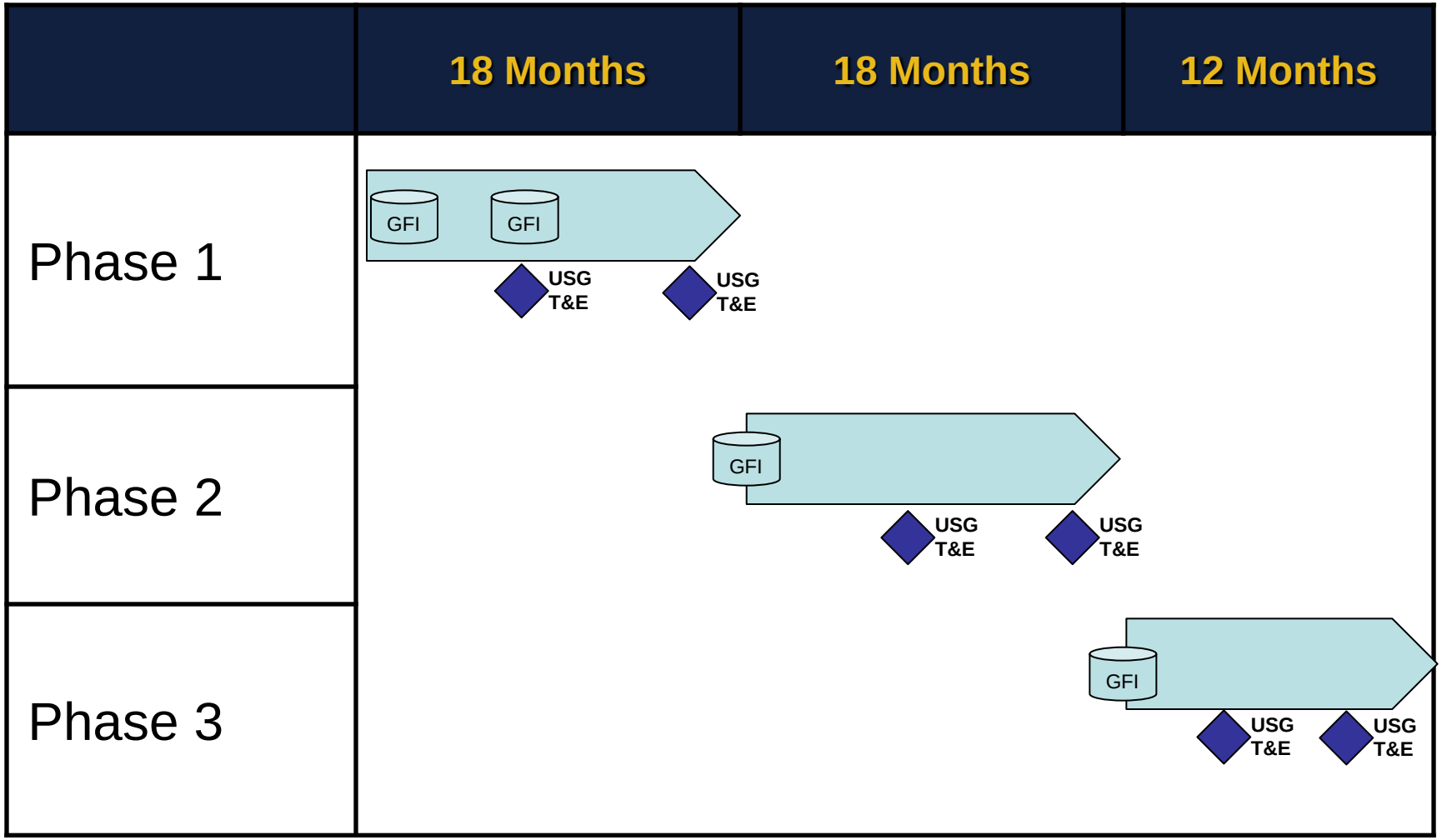
Testing and Evaluation

- The Government will provide
  - Data (videos and photos) throughout the program
  - A high-level API informed by NIST standards with source code for a sample API-conformant test harness
- Evaluations will include both new subjects and novel views of previous subjects
- Performers will self-report results at six-month waypoints
- A Government-led team will independently evaluate performance against program metrics
  - Access to performer systems at pre-specified intervals
- In later phases, performers will be required to conduct time-constrained evaluations on novel datasets

Notes On Deliverables

- At the end of each phase performers will deliver the hardware specification and complete software for a standalone, API-conformant system which meets or exceeds the phase goals
- The use of specialized (e.g., GPUs, FPGAs) and proprietary hardware is permitted
- Performers should follow industry best practices for software engineering

Janus 4-year Schedule



Application Review Information

Evaluation Criteria

- Overall Scientific and Technical Merit
- Effectiveness of Proposed Work Plan
- Relevance to IARPA Mission and Janus Program Goals
- Relevant Experience and Expertise
- Cost Realism

Relevant Experience & Expertise

- Successful teams are expected to be multidisciplinary, with a variety of scientific and technical skills, such as:
  - Pattern recognition and machine learning;
  - Computer vision and image processing;
  - Computer graphics and animation;
  - Mathematical statistics and modeling;
  - Physiology and anatomy;
  - High performance computing;
  - Data visualization and analytics.

Publications

- Publication of results of the research project in appropriate professional journals is encouraged as an important method of recording and reporting scientific information and will be among the required deliverables

- One courtesy copy of all papers and/or presentations to be presented in any public forum must be submitted to the IARPA Program Manager at least two calendar weeks prior to submission for publication

- Following publication, final copies of published papers and presentations must be submitted to the IARPA Program Manager and Contracting Officer's Representative

Out of Scope

- Proposed research that does not have strong theoretical and experimental foundations or plausible scientific support for Offeror's claims to be able to achieve the Janus Program metrics
- Approaches that propose, or are likely to result in, only incremental improvements over current state of the art
- Interventions that rely primarily or exclusively on new or modified user interfaces
  (e.g., 3D Graphical User Interfaces, haptic screens)

Summary

- The time of mugshot-to-mugshot matching is past
- More videos and images are created each day than all of the “purpose collected” identification media ever created
- Help us turn the challenge of big data into an advantage
- Change the world of face recognition

Point of Contact

Dr. Mark Burge

Program Manager
IARPA, Smart Collection Office

Office of the Director of National Intelligence
Intelligence Advanced Research Projects Activity
Washington, DC 20511

Email: dni-iarpa-baa-13-07@iarpa.gov
(include IARPA-BAA-13-07 in the Subject Line)

Website: www.iarpa.gov

OFFICE OF THE DIRECTOR OF NATIONAL INTELLIGENCE

Intelligence Advanced Research Projects Activity (IARPA)
Overview Briefing

LEADING INTELLIGENCE INTEGRATION

Dr. Edward J. Baranoski
Director, Office of Smart Collection
13 June 2013

Overview

IARPA's mission is to invest in high-risk/high-payoff research programs that have the potential to provide the U.S. with an overwhelming intelligence advantage over our future adversaries

- CAVEAT: HIGH-RISK/HIGH-PAYOFF IS NOT A FREE PASS FOR STUPIDITY.
- Bring the best minds to bear on our problems.
  - World-class Program Managers (PMs).
    - IARPA will not start a program without a good idea and an exceptional person to lead its execution.
  - Full and open competition to the greatest possible extent.
- Cross-community focus.
  - Address cross-community challenges & leverage community expertise
  - Work transition strategies and plans

The "Heilmeier Questions"

1. What are you trying to do?
2. How does this get done at present? Who does it? What are the limitations of the present approaches?
   - Are you aware of the state-of-the-art and have you thoroughly thought through all the options?
3. What is new about your approach? Why do you think you can be successful at this time?
   - Given that you've provided clear answers to 1 & 2, have you created a compelling option?
   - What does first-order analysis of your approach reveal?
4. If you succeed, what difference will it make?
   - Why should we care?
5. How long will it take? How much will it cost? What are your mid-term and final exams?
   - What is your program plan? How will you measure progress? What are your milestones/metrics? What is your transition strategy?

The "P" in IARPA is very important

- Technical and programmatic excellence are required
- Each Program will have a clearly defined and measurable end-goal, typically 3-5 years out.
  - Intermediate milestones to measure progress are also required
  - Every Program has a beginning and an end
  - A new program may be started that builds upon what has been accomplished in a previous program, but that new program must compete against all other new programs
- This approach, coupled with rotational PM positions, ensures that…
  - IARPA does not "institutionalize" programs
  - Fresh ideas and perspectives are always coming in
  - Status quo is always questioned
  - Only the best ideas are pursued, and only the best performers are funded.

Office of Smart Collection

"dramatically improve the value of collected data"

Novel Access	Asset Validation and Identity Intelligence	Tracking and Locating
Provide technologies for reaching hard targets in denied areas	▪ Detect the trustworthiness of others ▪ Advance biometrics in real-world conditions	Accurately locate HF emitters and low-power, moving emitters with a factor of ten improvement in geolocation accuracy

Office of Incisive Analysis

"maximizing insight from the information we collect, in a timely fashion"

Large Data Volumes and Varieties	Social-Cultural and Linguistic Factors	Improving Analytic Processes
Providing powerful new sources of information from massive, noisy data that currently overwhelm analysts.	Analyzing language and speech to produce insights into groups and organizations.	Dramatic enhancements to the analytic process at the individual and group level.

Office of Safe and Secure Operations

"counter emerging adversary potential to deny our ability to operate effectively in a globally-interdependent and networked environment"

Computational Power	Trustworthy Components	Safe and Secure Systems
Revolutionary advances in science and engineering to solve problems intractable with today's computers	Getting the benefits of leading-edge hardware and software without compromising security	Safeguarding mission integrity in a hostile world

How to engage with IARPA

- **Website:** www.iarpa.gov
  - Reach out to a PM or an Office Director (OD). Contact information is on the website.
  - Schedule a visit if you are in the DC area, or invite us to visit you.
- **Opportunities to Engage**:
  - Program BAAs.
    - Proposers Days are a great opportunity to learn in advance what is coming, and to influence the BAA.
    - Proposals are typically due 45-60 days after the BAA is published in order to be considered for the first round of evaluation, but most are open for a year.
    - Read carefully. Follow instructions. Read posted Q&As and send Qs if you don't understand something. Watch for amendments.
  - Office-Wide BAAs for "Seedlings"
    - "Seedlings" are typically 9-12 months in duration. Intended to flesh out an idea to determine if a full program is warranted.
    - Each Office has one. Open year round. New topics get added periodically.
    - Contact a PM or OD before submitting an abstract or proposal.
  - Requests for Information (RFIs)
    - Often lead to workshops and ultimately programs; opportunity to provide input as a PM is thinking about a new program.

Concluding Thoughts

- Our problems are complex and truly multidisciplinary
- Technical Excellence & Technical Truth
  - Scientific Method
  - Peer/independent review
  - Full and open competition
- We are looking for outstanding PMs.
- How to find out more about IARPA:

  www.iarpa.gov

OFFICE OF THE DIRECTOR OF NATIONAL INTELLIGENCE

"Doing Business with IARPA" Briefing

JANUS Proposers' Day

LEADING INTELLIGENCE INTEGRATION

13 June 2013

INTELLIGENCE ADVANCED RESEARCH PROJECTS ACTIVITY (IARPA)

Doing Business with IARPA - Recurring Questions

- Questions and Answers (http://www.iarpa.gov/faq.html)
- Eligibility Info
- Intellectual Property
- Pre-Publication Review
- Preparing the Proposal (Broad Agency Announcement (BAA) Section 4)
  - Electronic Proposal Delivery (**https://iarpa-ideas.gov**)
- Organizational Conflicts of Interest (http://www.iarpa.gov/IARPA OCI_081809.pdf)
- Streamlining the Award Process
  - Accounting system
  - Key Personnel
- IARPA Funds Applied Research
- RECOMMENDATION: Please read the entire BAA

Responding to Q&As

- Please read entire BAA before submitting questions
- Pay attention to Section 4 (Application & Submission Info)
- Read Frequently Asked Questions, IARPA web site @ http://www.iarpa.gov/faq.html
- Send your questions as soon as possible
  - JANUS BAA: dni-iarpa-baa-13-07@iarpa.gov
  - Write questions as clearly as possible
  - Do NOT include proprietary information

Eligible Applicants

- Collaborative efforts/teaming strongly encouraged
  - Content, communications, networking, and team formation are the responsibility of Proposers
- Foreign organizations and/or individuals may participate
  - Must comply with Non-Disclosure Agreements, Security Regulations, Export Control Laws, etc., as appropriate, as identified in the BAA

Ineligible Organizations

Other Government Agencies, Federally Funded Research and Development Centers (FFRDCs), University Affiliated Research Centers (UARCs), and any organizations that have a special relationship with the Government, including access to privileged and/or proprietary information, or access to Government equipment or real property, are not eligible to submit proposals under this BAA or participate as team members under proposals submitted by eligible entities.

Intellectual Property (IP)

- Unless otherwise requested, Government rights for data first produced under IARPA contracts will be UNLIMITED.
- At a minimum, IARPA requires Government Purpose Rights (GPR) for data developed with mixed funding
- Exceptions to GPR
  - State in the proposal any restrictions on deliverables relating to existing materials (data, software, tools, etc.)
- If selected for negotiations, you must provide the terms relating to any restricted data or software, to the Contracting Agent

Pre-Publication Review

- Funded Applied Research efforts, IARPA encourages:
  - Publication for Peer Review of **UNCLASSIFIED** research
- Prior to public release of any work submitted for publication, the Performer will:
  - Provide copies to the IARPA PM and Contracting Agent Representative (COR/COTR)
  - Ensure shared understanding of applied research implications between IARPA and Performers
  - Obtain IARPA PM approval for release

Preparing the Proposal

- Note restrictions in BAA Section 4 on proposal submissions
  - Interested Offerors must register electronically IAW instructions on: **https://iarpa-ideas.gov**
  - Interested Offerors are strongly encouraged to register in IDEAS at least 1 week prior to proposal "Due Date"
  - Offerors must ensure the version submitted to IDEAS is the "Final Version"
  - Classified proposals – Contact IARPA Chief of Security
- BAA format is established to answer most questions
- Check FBO for amendments & IARPA website for Q&As
- BAA Section 5 – Read Evaluation Criteria carefully
  - e.g. "The technical approach is credible, and includes a clear assessment of primary risks and a means to address them"

Preparing the Proposal (BAA Sect 4)

- Read IARPA's Organizational Conflict of Interest (OCI) policy: http://www.iarpa.gov/IARPA OCI_081809.pdf
  - See also eligibility restrictions on use of Federally Funded Research and Development Centers, University Affiliated Research Centers, and other similar organizations that have a special relationship with the Government
  - Focus on possible OCIs of your institution as well as the personnel on your team
  - See Section 4: It specifies the non-Government (e.g., SETA, FFRDC, UARC, etc.) support we will be using. If you have a potential or *perceived* conflict, request waiver as soon as possible

Organizational Conflict of Interest (OCI)

- If a prospective offeror, or any of its proposed subcontractor teammates, believes that a potential conflict of interest exists or may exist (whether organizational or otherwise), the offeror should promptly raise the issue with IARPA and submit a waiver request by e-mail to the mailbox address for this BAA at dni-iarpa-baa-13-07@iarpa.gov.
- A potential conflict of interest includes but is not limited to any instance where an offeror, or any of its proposed subcontractor teammates, is providing either scientific, engineering and technical assistance (SETA) or technical consultation to IARPA. In all cases, the offeror shall identify the contract under which the SETA or consultant support is being provided.
- Without a waiver from the IARPA Director, neither an offeror, nor its proposed subcontractor teammates, can simultaneously provide SETA support or technical consultation to IARPA and compete or perform as a Performer under this solicitation.

Streamlining the Award Process

- Cost Proposal – we only need what we ask for in BAA
- Approved accounting system needed for Cost Reimbursable contracts
  - Must be able to accumulate costs on job-order basis
  - DCAA (or cognizant auditor) must approve system
  - See http://www.dcaa.mil, Information for Contractors under "Publications"
- Statements of Work (format) may need to be revised
- Key Personnel
  - Expectations of time, note the Evaluation Criteria requiring relevant experience and expertise
- Following selection, Contracting Agent may request your review of subcontractor proposals

IARPA Funding

- IARPA funds Applied Research for the Intelligence Community (IC)
  - IARPA cannot waive the requirements of Export Administrative Regulation (EAR) or International Traffic in Arms Regulation (ITAR)
  - Not subject to DoD funding restrictions for R&D related to overhead rates

- IARPA is not DOD

Disclaimer

- This is Applied Research for the Intelligence Community

- Content of the Final BAA will be specific to this program
  - The Final BAA is being developed
  - Following issuance, look for Amendments and Q&As
  - There will likely be changes

- The information conveyed in this brief and discussion is for planning purposes and is subject to change prior to the release of the Final BAA.

QUESTIONS ?