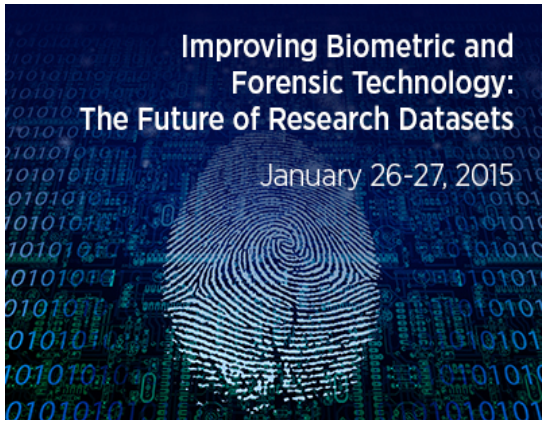

Biometric and Forensics Research Database Catalog

Project Briefing

January 23, 2015

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NIST FORENSIC SCIENCES

Forensic Science Program Overview

MISSION

The Office of Special Programs' Forensic Science Program (FSP) will be the premier resource for forensic science standards through research, development, testing, evaluation, outreach, and advocacy.

VISION

To promote and enhance the application of science to the pursuit of justice.

Forensic Science Program Overview

To achieve this mission:

- We provide access to research, measurement science, and standards that make the forensic science community more successful
- We form the best teams to develop solutions to complex forensic science problems
- We create opportunities for success at NIST through trusted and reliable partnerships
- We connect NIST scientists with forensic practitioners to better use the full range of competencies that make NIST a unique agency

Forensic Science Program Overview

Project Outputs of These Activities Include:

- Standard reference materials development
- Guidance documents development
- Design of test methods, operating procedures, measurement tools, equipment guidelines, and artifact standards
- Research to develop and validate emerging technologies and science
- Technology transfer
- Providing strategic counsel, management, technical assistance, and outreach

The Biometric and Forensic Dataset Project

NIJ has sponsored NIST to:

- Create a **comprehensive catalog** of publicly available biometric and forensic datasets for the following modalities: finger/palmprints, iris, face, person at a distance, voice, and handwriting; and
- Host a **symposium** to discuss the adequacy of existing publicly-available datasets and the future needs in these areas.

The Biometric and Forensic Database Cataloging Effort

Goals

- To provide a pointer to publicly available datasets for researchers
- To provide baseline data on existing publicly available datasets to determine gaps for future collections
- To use lessons learned to establish best practices in developing databases

The Biometric and Forensic Database Catalog Effort

Data Collection

Phase 1 – Collect comprehensive listing of existing databases

Phase 2 – Categorize based on taxonomy

Phase 3 – Evaluate and assess quality of datasets

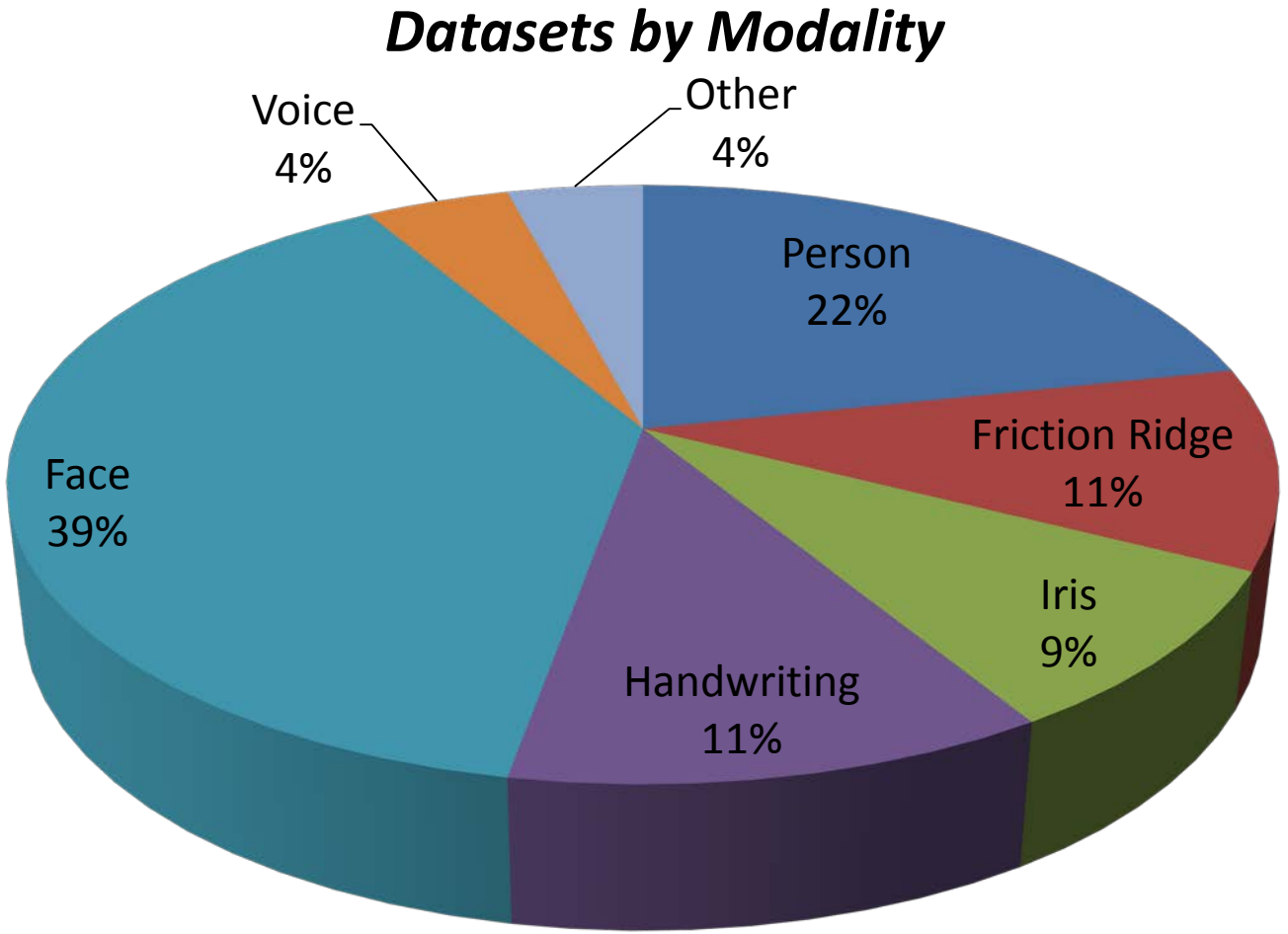
The Biometric and Forensic Database Cataloging Effort

Where did we look?

1. Web searches
2. Journal articles
3. Universities with well known programs in biometrics
   - WVU, Michigan State, Notre Dame, Carnegie Mellon, etc.

So far we've found 362 datasets…

The Biometric and Forensic Database Cataloging Effort



Total: 362

*About 5% (18) of the databases were multi-modal

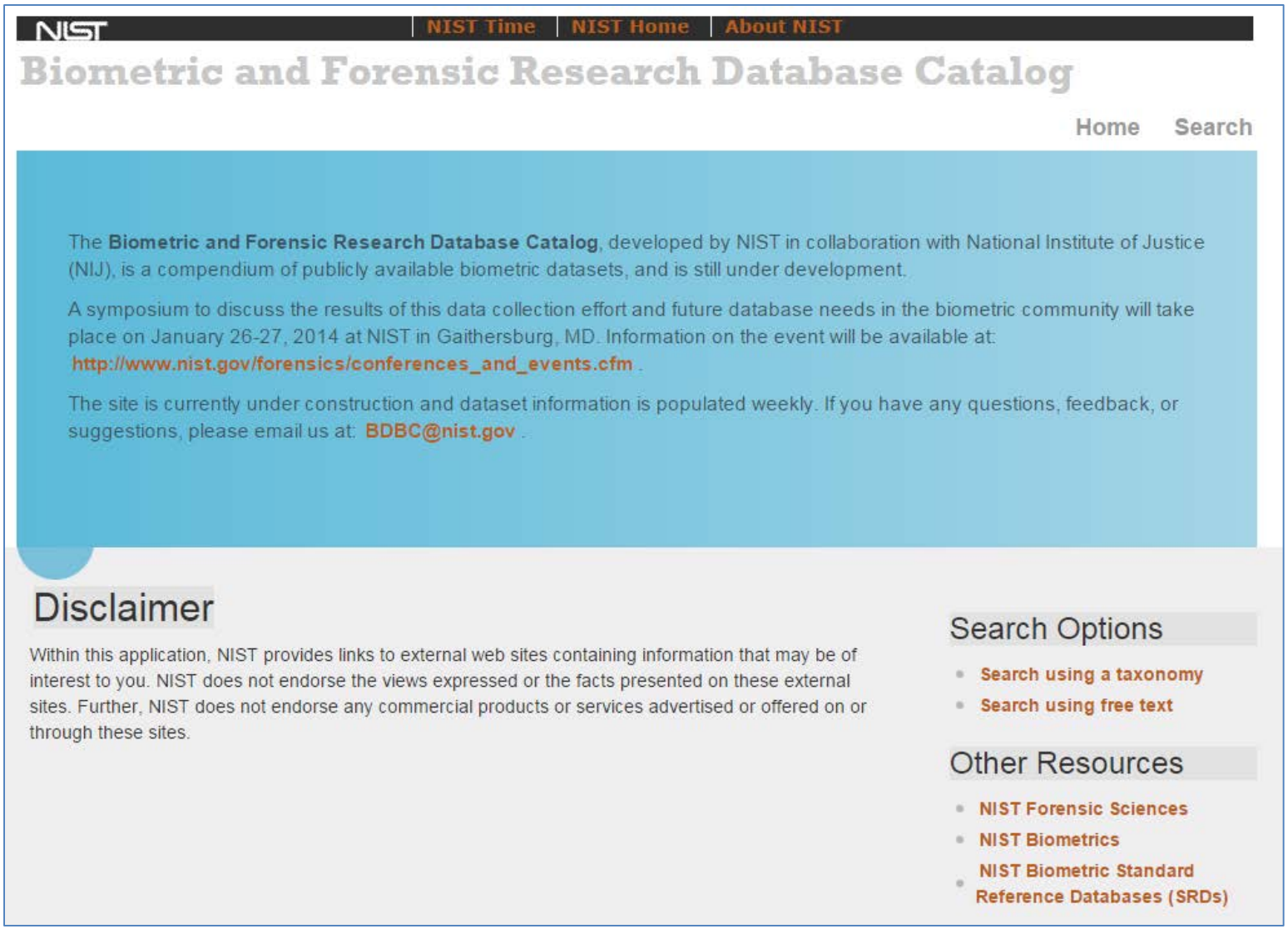
The Biometric and Forensic Database Cataloging Effort

Site Development

- Site created with in-house NIST Office of System Information Management (OISM) developers
- Can be used internally for data entry and externally to conduct searches
- Users are capable of conducting two types of searches: via text or via taxonomy
- 165 databases currently entered

https://tsapps.nist.gov/BDbC/

Catalog Homepage

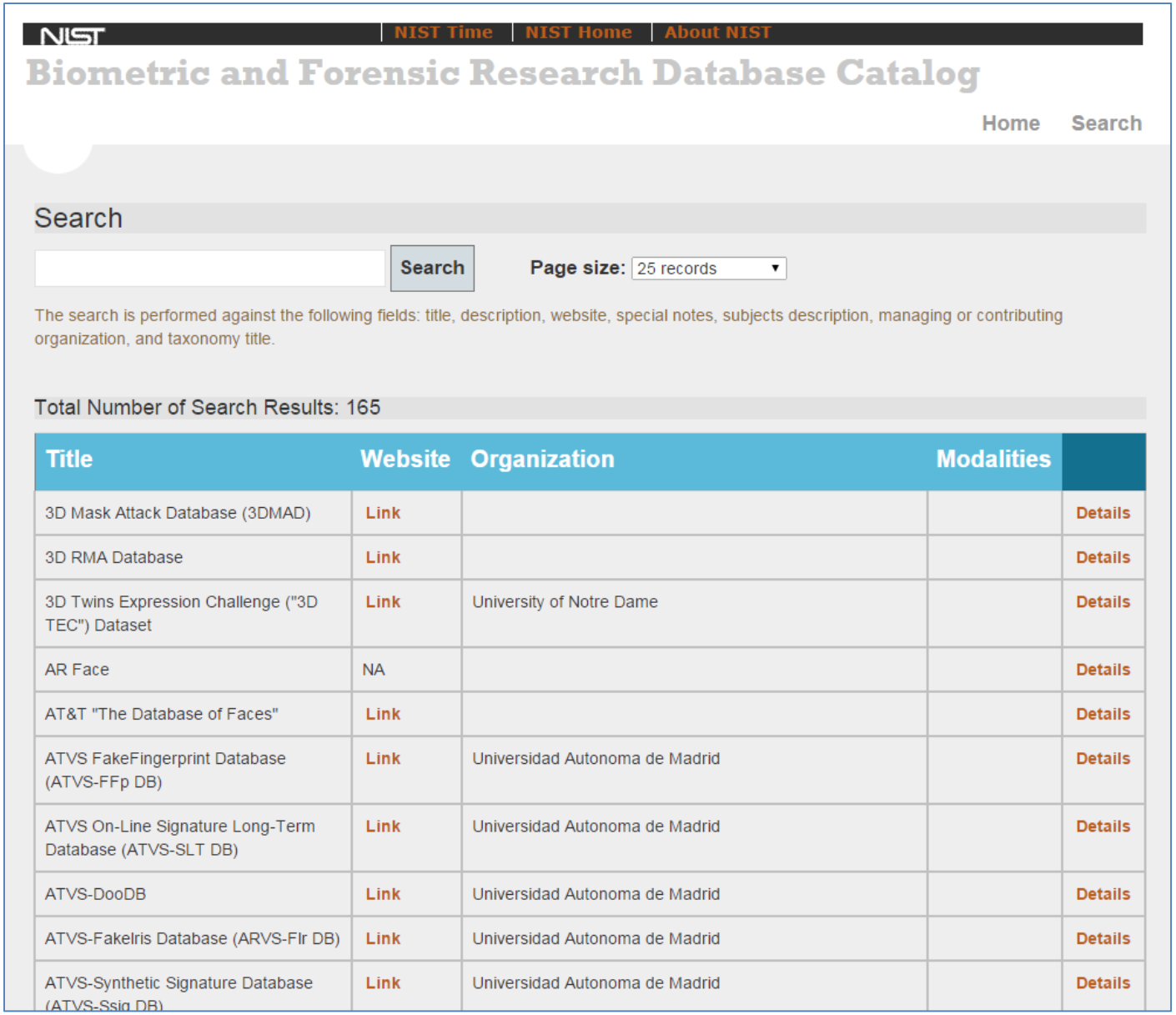


Options to search via text or taxonomy

Related NIST pages

https://tsapps.nist.gov/BDbC/

NIST FORENSIC SCIENCES



NIST | NIST Time | NIST Home | About NIST

Biometric and Forensic Research Database Catalog

Home Search

Search

Search

Page size: 25 records

The search is performed against the following fields: title, description, website, special notes, subjects description, managing or contributing organization, and taxonomy title.

Total Number of Search Results: 165

Title	Website	Organization	Modalities	
3D Mask Attack Database (3DMAD)	Link			Details
3D RMA Database	Link			Details
3D Twins Expression Challenge ("3D TEC") Dataset	Link	University of Notre Dame		Details
AR Face	NA			Details
AT&T "The Database of Faces"	Link			Details
ATVS FakeFingerprint Database (ATVS-FFp DB)	Link	Universidad Autonoma de Madrid		Details
ATVS On-Line Signature Long-Term Database (ATVS-SLT DB)	Link	Universidad Autonoma de Madrid		Details
ATVS-DooDB	Link	Universidad Autonoma de Madrid		Details
ATVS-FakeIris Database (ARVS-FIr DB)	Link	Universidad Autonoma de Madrid		Details
ATVS-Synthetic Signature Database (ATVS-Ssig DB)	Link	Universidad Autonoma de Madrid		Details

Search Via Text Page

https://tsapps.nist.gov/BDbC/Search

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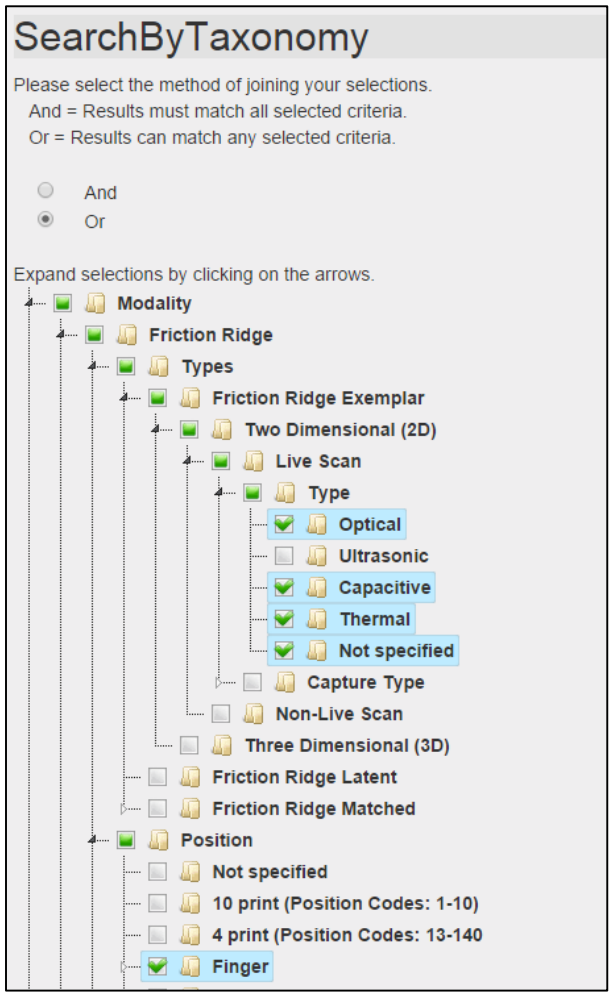
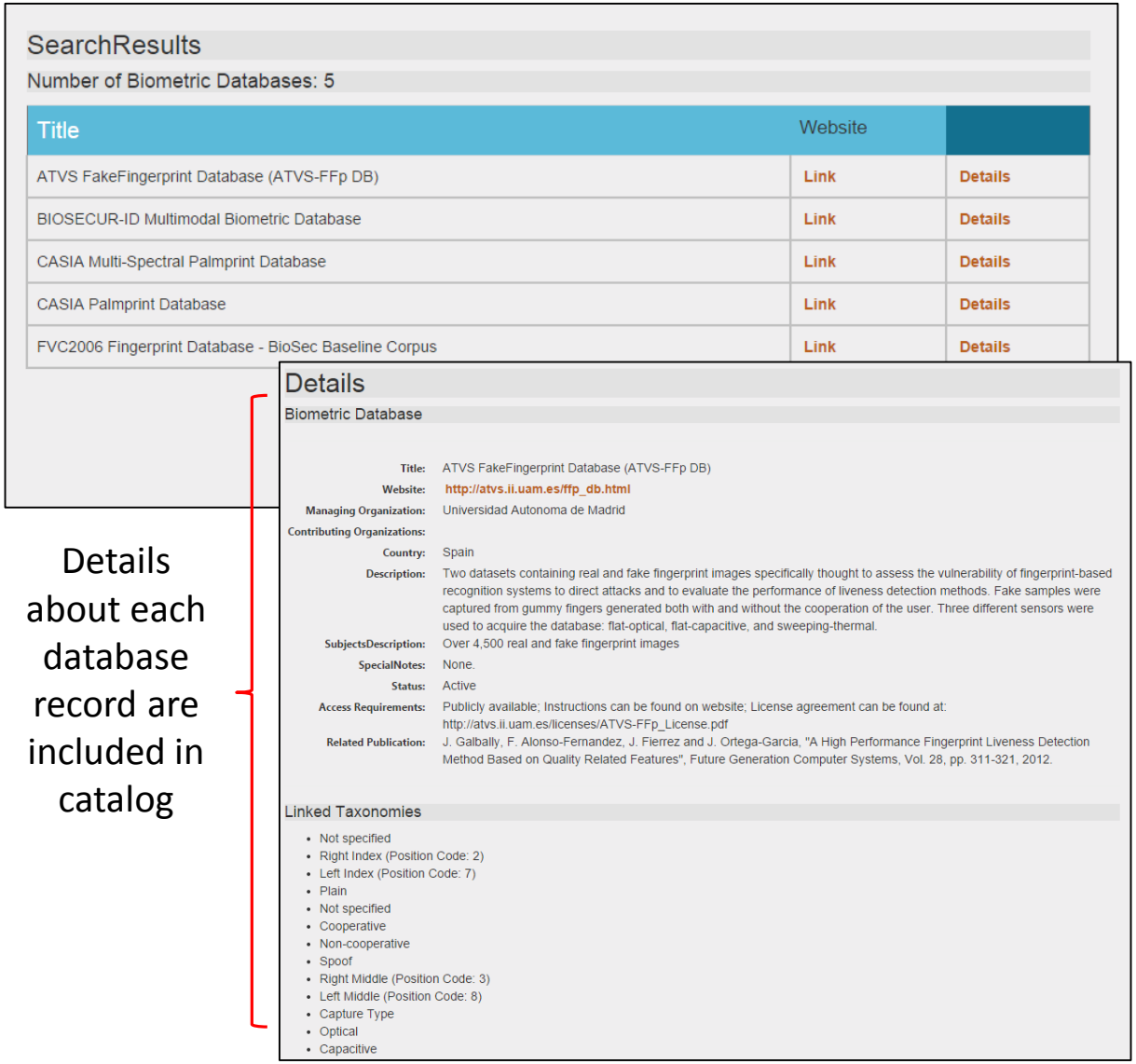
Search by text or taxonomy





Details about each database record are included in catalog

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The Biometric and Forensic Database Cataloging Effort

Data Collection – Entry Details

- Title
- Website
- Managing Organization
- Contributing Organization
- Country
- Description
- Subjects Description
- Special Notes
- Status
- Access Requirements
- Related Publication

The Biometric and Forensic Database Cataloging Effort

Data Collection

Taxonomy Categories

- **212 categories**
- Major categories include: modality, data type, quality, method of associating mated subjects, capture, and misc. data characteristics

https://tsapps.nist.gov/BDbC/Search/SearchByTaxonomy

The Biometric and Forensic Database Cataloging Effort

We need your help…

- Please provide your feedback to the existing catalog, how it is categorized, and whether it is useful
- All the information collected will be used in road map and best practice guide for developing future databases

BDBC@nist.gov

The Biometric and Forensic Database Cataloging Effort

Acknowledgements

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Questions?

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