MATOS and GLATOS
2015-2016 Development

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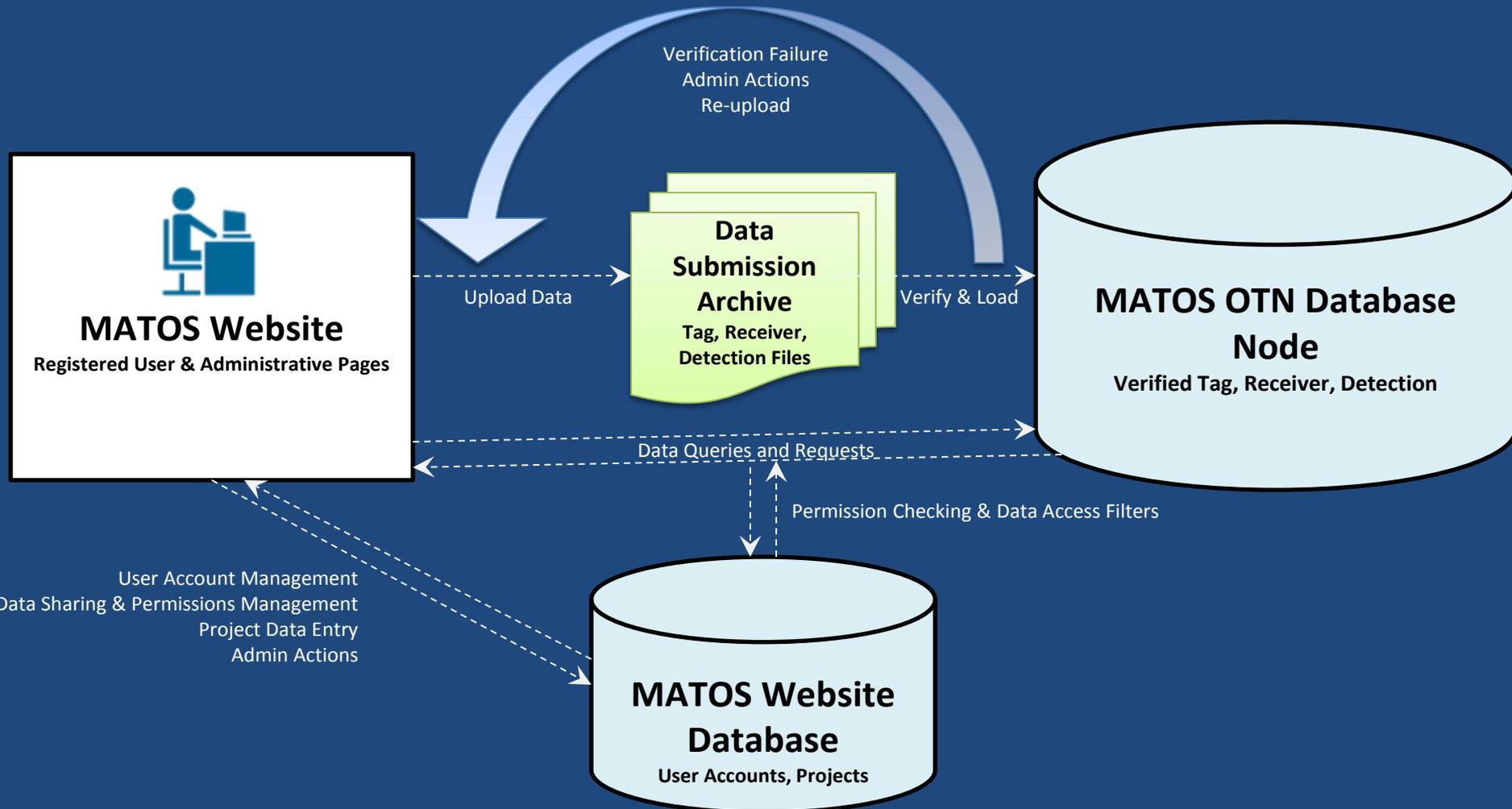## June 3, 2016

MATOS: Website and Database Goals

- Database that will house TAG and RECEIVER metadata, and raw DETECTION data

- Website to facilitate data uploading, searching, downloading, and supports map-based visualization tools

- Data entry, upload, and database design based on Ocean Tracking Network (OTN) framework and standards

- Login-enabled graphical user interface to facilitate data access, input, manipulation, and viewing

- User specified data access and distribution controls/permissions

- Automated INPUT of real-time DETECTION data and associated environmental sensor data (where possible)

MATOS: 2015-2016 Development Priorities

- Stand up OTN schema and implement as the *new MATOS database* (backend)

- Set up data submission *verification and loading scripts*

- Design *new MATOS website* (front end) compatible with OTN database

- Design *new data submission process* to account for:
  - project metadata entry
  - user permissions and data sharing restrictions
  - MATOS administrative approval/actions

- Implement *web pages* needed for data submission process

- Design *MATOS website database system* that will house project metadata, user account information, permissions, data sharing restrictions

Basic Components of the System

MATOS Website
Registered User & Administrative Pages

Verification Failure
Admin Actions
Re-upload

Data Submission Archive
Tag, Receiver, Detection Files

Upload Data

Verify & Load

MATOS OTN Database Node
Verified Tag, Receiver, Detection

Data Queries and Requests

Permission Checking & Data Access Filters

User Account Management
Data Sharing & Permissions Management
Project Data Entry
Admin Actions

MATOS Website Database
User Accounts, Projects

MATOS Website Functions

User Interface for uploading, downloading, searching, and visualizing:

- Project Metadata
- Tag Metadata
- Receiver Deployment Metadata
- Detection Data

Other Functions include:

- User Account Set Up and Request
- User Login
- Project Metadata Page Entry
- Data Sharing Permissions Set up and Management
- Admin tools and actions

User Account Modes

General –General users may search and download publically available telemetry data.

Researcher –Researchers interested in utilizing MATOS data for studies (e.g. grad student). Researchers may search and download publically available telemetry data and can request access to protected data from investigators for various projects.

Investigator – Contributor to MATOS database and principle investigator of MATOS project(s). Investigators set up and maintain project page(s), set sharing permissions on data types, approves data sharing requests, and manages ring of users approved to download protected data.

Administrative – MATOS administrative management use only. Admin users approve user account requests, reviews project metadata entries, and approves data uploads.

MATOS Website

User Account Modes

General

Researcher

Investigator

Administrative
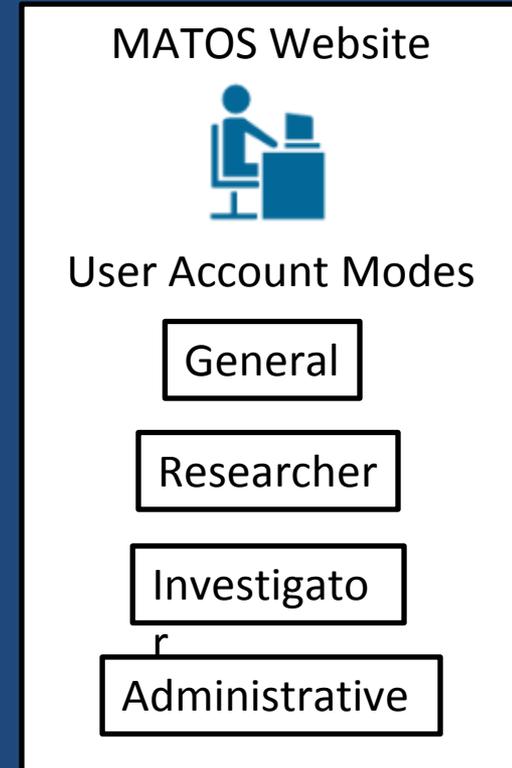
Real-time Detection Data
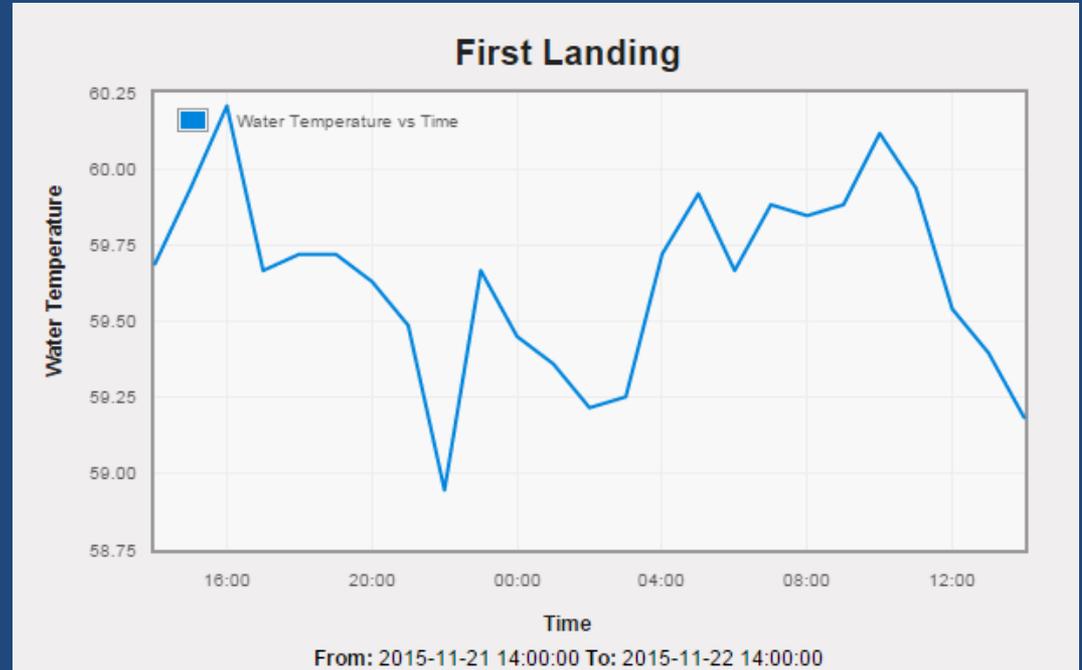
Chesapeake Bay Interpretative Buoy System (CBIBS) detections and environmental data integration.

GLATOS: 2016 Development Priorities

- Redesign and streamline workflow of MATOS databases (SQLServer)

- Redesign frontend (.net)
  - Traditional navigation bar
  - Informational outreach pages
  - Data portal for registered members with log in
  - Administrative actions to control various aspects of website and access information in website database
  - Revamp mapping application and query tools

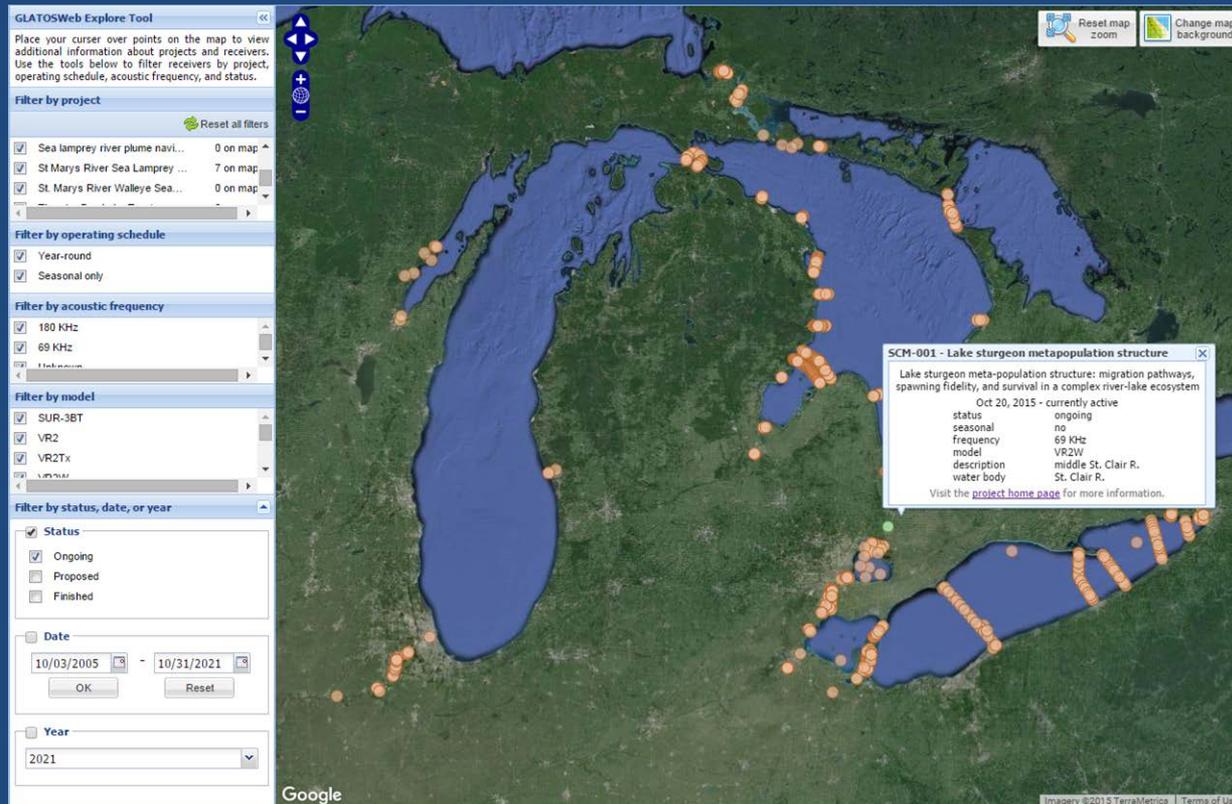# GLATOS: New Work Flow
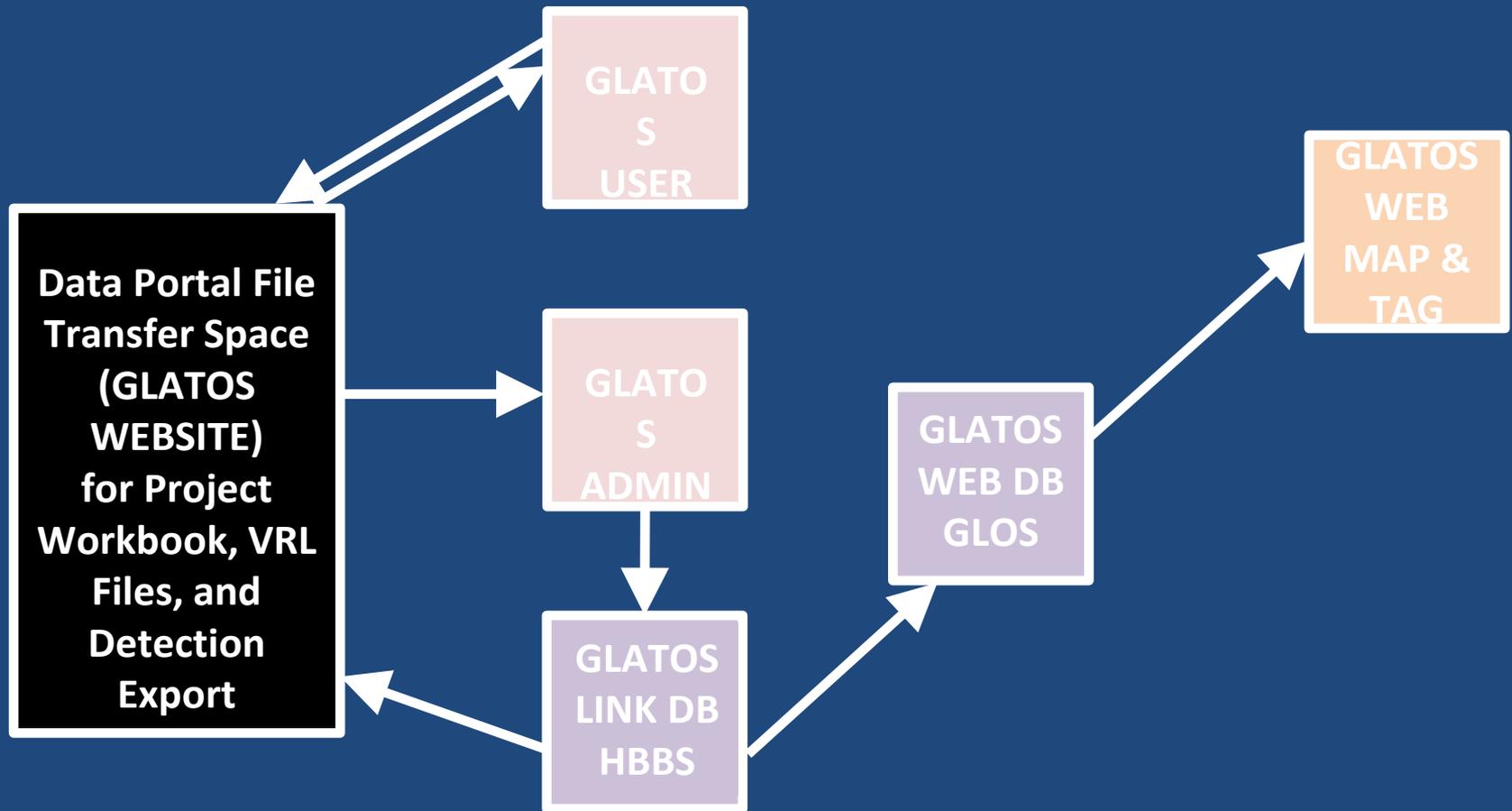
GLATOS: 2016 Development Priorities

- Demo of development site

  – http://162.210.162.137:83/

Mid-Atlantic Acoustic Telemetry Observing System (MATOS)

Great Lakes Acoustic Telemetry Observing System (GLATOS)

Thank You!

Mapping Application: Visualization and Searching

Map window to display receiver locations, point and click on locations for metadata, display tag hits via tag number search function on map page, and generate track lines.