

## PTSC Meeting – February 24, 2005 9:00 Portland

Attendees: Doug Marsh (NOAA-F), Tom Hoffman (USFWS), Ed Beuttner (IDFG), Brian Johnsson (ODFW), Charles Morrill (WDFW), Carter Stein, Dave Marvin, Ryan Day, John Tenney, Nadia Gruman (PSMFC), Earl Prentice, Sandy Downing (NOAA-F), Dean Park, Sean Casey (Biomark), Zeke Mejia (Digital Angel).

1. Shall there be a 'generic coordinator ID for "long term" projects?
  - Discussion: The coordinator ID could be associated with the project rather than the individual.
  - The current process for retiring Coordinator is to make a note that the coordinator is no longer active. The codes in the original data files stay the same. The codes in the database stay the same.
  - Earl asked what is "Long Term"?
  - PTAGIS currently associates one or more PTAGIS users (generally data submitters) with a single coordinator ID.
  - Carter would like to be able to be able to contact an individual associated with the three letter code, have the code approved by the steering committee members, and to have a clear definition of the code described in the Specification Document.
  - The Committee consensus is to allow the coordinator id to be associated with a "Long Term" project.

Change to COORDINATOR ID code definition in the "2005 PIT Tag Specification Document": A field in Tagging Files used to record the (generally) three-character initials of the Coordinator or a **"long term" Research Program**. The Coordinator is responsible for the marking or recovery operation utilizing the PIT tags, and for responding to queries from other entities regarding those operations....

- PTAGIS staff will consider mechanisms to keep track of coordinator id's and people responsible for "Research Programs" over time, as they investigate new data models. In addition, PTAGIS will prepare a process to allow the Coordinator ID's to be updated in a systematic, automated process.
  - Ed Buettner will provide guidance to PTAGIS to assist in implementing the new requirement.
2. Shall USGS be member to PTSC?
    - Ian Jazorik described USGS efforts in PIT tag research. Especially with respect to in-stream marking and detection.

- USGS has been working with Charles Morrill to have new codes approved.
- Ed mentioned that it is important to note that PTSC is a sub committee of a sub committee of CBFWA.
- Earl suggested that PTSC make a recommendation to FPAC.
- Charles made a motion that he draft a letter for the Committee to send to FPAC. The letter would state that the Steering Committee would like to have USGS as a committee member. In addition, PTSC is asking FPAC for guidance on how to do that and what other entities would be eligible for membership.
- FPAC could direct a reply to the USGS Lab Director (Ian will provide name and address).

### 3. Updates to PIT Tag Specifications Document

- Brian Jonasson discussed the re-use of PIT tags. Update footnote on the bottom of page 19... “or the fish being released”.
- Carter passed out the current change page.
- PTAGIS Staff need to consider development of a “PTAGIS” user guide that describes for people on tagging projects how to set up a project and eventually get data into PTAGIS.
- PTSC agreed to change PIT Tag Data Event model to better represent Mark Recapture studies.
- Committee agreed to 2005 PIT Tag Specifications Document changes (see section II of 2005 PIT Tag specification document).
- Committee discussed how to clean up the CHECKSUM field of INTERROGATION FILES. Change “CHECKSUM” to TRANSCIEVER ID. (note impact to IDL?).
- PTAGIS Staff to review “Appendix B: Monitoring Naming Standards” and present recommended changes to PTSC.

### 4. New Sites

- Carter asked PTSC members to use the “New Validation Code” service, available when they log in to the PTAGIS beta test web site, to set up new interrogation, mark / recapture sites and other validation codes.
- NOAA and USGS have new sites to set up.

### 5. Does PTSC agree to incorporate HDX PIT tag data?

- Earl suggested that PTAGIS is a regional system and should be able to incorporate HDX.
- Zeke mentioned that Texas Instruments requires a license
- Charles raised concern about impact to PTAGIS staff and development resources.
- Dave M. explained that different HDX readers emit codes in different formats
- Earl suggested that Warren Leach could be a resource to answer technical questions related to HDX.
- Doug M. mentioned that a Specification Document may need to be written to address HDX requirements.
- PTSC members were polled on the question. The committee supports the idea, but has concern that if PTAGIS staff make required changes that users still may not use the new tools.
- PTSC will poll people using the information and see if they are interested in submitting their data to PTAGIS.
- Earl mentioned potential interference problems. FD will interfere with the HDX but the HDX does not appear to have an impact of the FD system. Note after meeting commitment: DA will be looking further into this subject. DA will determine if there is a reduction in the number of FD tag reads on an antenna when a HDX system is operating near a FD system.
- The committee discussed asking FPAC for direction on utilizing PTAGIS as a centralized repository for HDX data.
- Carter said that PTAGIS staff work on new designs and maintenance activities assuming that HDX may be required in the future.

6. Any Separation by Code Activities?

- Doug said NOAA-F will send a letter in the next week or so (Achord, Marsh, F-Ch Studies).
- Have not heard from FPC re: CSS study, but Ed B. says fish are being tagged and assume that project will be operated as in the past.

7. PTAGIS Update

- See Carter's PTAGIS Update presentation.
- See John's MobilMon and Mobil Sync Manager presentation.

8. SGL Tag Evaluation Update

- Sandy reported that the SGL is qualified for uses in the basin. See the PIT Tag Steering Committee workspace on the PTAGIS web site for a description of the test protocol, the test data and analytical summary of the tag qualification tests.
- Zeke said that Digital Angel has invested in raw materials in anticipation of big orders.
- PTSC needs to educate investigators about the trade-offs of using the various different types of tags.
- PTSC requests that PTAGIS make a special e-mail communication to Tag Coordinators when Version 5 firmware distribution is available.

9. Zeke reported that DA is working on making some 8mm tags for evaluation purposes. He asked PTSC if 1000 units was enough for an initial run. Ed mentioned that he was concerned about diameter as well as length. No, 100 tags is not sufficient since I alone need 1000 tags ASP for out of Basin work.

10. Zeke reported changes at DA. DA should have a person selected to support fisheries applications within the next couple of weeks. He will arrange to bring the new person out to the region to meet people and become familiar with the systems shortly after the person is on board.

11. Zeke gave an overview of the Bonneville Corner Collector project. He said that the new project would incorporate what was learned from the last development effort. He reported that the consensus was to move forward with an “air coil”, “slot style” antenna. There are two milestones: 1) determine the size of antenna that can read tags (16’, 18’ & 22’); 2) construct a full or partial scale model of the production antenna for subsequent testing prior to construction. The length of the antenna could be minimized to about four feet.

12. Zeke provided a status on the G2 reader. Five working systems will be ready to be moved to the field and tested in beginning in March 2005 (testing will be in April, May and June). The units seem to work better than the FS1001A due to Digital Signal Processing (DSP) features.

- Zeke described the new readers and passed out diagrams that illustrated the G2. Each unit could drive up to two antennas. The units could operate simultaneously, and continuously. Alternatively, the units could run in a ‘multi-plexing’ mode. Up to six antennas could be daisy chained together to operate in the multi-plexing mode.
- Zeke said that he would ship the first unit to PTAGIS so that John could work on implementing a device driver in the MiniMon environment. Subsequent to initial development of the data collection tool, the G2 project team would meet at Manchester to hold a project status meeting. The purpose of the meeting would be to determine that the unit meets the requirements, develop testing protocols, etc.

- Zeke reported that three multiplexers would ship next week. Fifty units would be shipped by the end of March, 2005.
- Zeke said that DA has an application for anti-collision technology, but it is limited to certain applications. It only works with slow moving targets. The time to read both tags is 86ms, this is about 15ms longer than reading each tag individually. Readers will need to be modified in order to send a message to the AC tag. The downside to the AC tag is that it doesn't work well in high speed applications. Since the transceiver turns off the AC tag
- Earl described status of the "Active / Passive" tag. The tag features the capability of behaving as a standard passive ISO FDX-B pit tag. However, the tag also has a battery. In areas of interest (e.g., dam spillways) the battery in the tag could be activated thus transforming the tag from a passive to an active RF tag. A specialized receiver and antenna would be used to capture the tag signal. The code during the active stage would be a different code from the passive code, but be related. In the active mode, the tag would not behave as an ISO tag. The data received from the tag would be available in near real time, similar to the present PIT tag. The tag would likely be larger (3mm in diameter by about 18mm long) than the traditional PIT tag. The tag is being designed for at least 12 interrogations over a period of 90 days. Yesterday, a spillway gate was operated at Bonneville dam in order to observe the dynamics of the spill and understand how it could impact A/P tag performance. The gate was opened five feet. Velocity of water under the spill gate is about 61 ft/sec. DA is evaluating the technical feasibility of developing a tag having the above attributes. This work is being performed by DA under contract with NOAA-F. A report is scheduled to be received from DA by the end of March. Earl suggests that a team be gathered to review the document and to determine whether the project should move forward, and if so, how. Spillways are the big challenge; however, another target detection location being considered is the turbine. Other interrogation points might be at bridges or in large streams using buoy systems or floating platforms. It is intended that the antennas for the detectors in this system be very simple. The antenna geometry may be simply a series of very small single cable antennas (i.e., coax cable). The tag read range is hoped to be 50 + feet. Cost of the tag will be more than the present tag but much less than the present radio tags being used in the Basin.
- Zeke said that the single use injector project under question. Issues are the size of the shipping container and the cost of the pre-loaded injectors. Zeke said that he take another crack at this project. He will have his design team contact Doug Marsh to provide gather new requirements.