

# BIOLOGGED DATA MANAGEMENT AND SHARING

## ORGANISING COMMITTEE

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## DATE AND VENUE

Wednesday 16<sup>th</sup> of March 2011, 8.40am-5pm, Frencynet conference room, CSIRO Marine Laboratories

## AIMS

The aim of this workshop is to draw the attention of Bio-logging "users" (scientists or managers) on the need for an efficient management of the ever-increasing amount of Bio-logged data, especially in a multi-user, collaborative context (data sharing), where integration with environmental data from remote sensing is an issue of increasing importance. The workshop participants will aim to produce a scientific review paper and technical documents proposing standardized approaches and viable solutions.

Specific objectives of the workshop are:

- to review the current approaches and solutions for Bio-logged data management and sharing
- to compare and contrast the available solutions and tools, and focus on common needs and requirements
- to propose standardized guidelines for best-practice Bio-logged data management and sharing
- to develop and offer practical tools to the Bio-logging community for data management and sharing.

## RELEVANCE

Datasets from Bio-logging are unprecedentedly detailed, high-resolution and precise, thus allowing complex modeling of animal behaviour and ecology. The management and integration of these huge and diverse datasets, however, can prove challenging and hamper the efficiency and efficacy of ecological analyses. Moreover, projects based on Bio-logging are often developed among several research bodies, that combine efforts and resources to get large scale ecological visions. Efficient and standardised data management and sharing are therefore a strict requirement. In recent years, several independent solutions have been proposed, along with some papers on the subject. However, there is an urgent need for a unified picture of the requirements needed, the proposed solutions, and the available tools on the table for Bio-logged data management and sharing. This could result in best practices to develop approaches based on standard, optimising efforts of the multitude of wildlife research and management bodies that are currently facing this problem, or will, in the near future.

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## PROSPECTED OUTCOMES (new!):

**1. THE PAPERS:** Biologged data management and sharing initiatives and tools improve quality of science, and do make an impact! Why not telling the scientific world, within a unique framework?

Some ideas:

- review current systems, and their impact on science
- well managed bio-logged data vs impact factor papers through yrs...
- "what system shall I go for?" A flow-chart guiding biologists in the data management jungle.

**2. THE GUIDELINES:** sharing a view (and not only data)? The big challenge: Best Practice Guidelines for Bio-logged data management and data sharing.

**3. THE NETWORK:** is it time for networking? Would a "Biologged Data Management Users Group" be an option?

Some ideas:

- working groups!
- online forum (R, Phidot...), offering support, confronting solutions, enhancing interoperability among different systems
- other follow-up workshops (also hosted by conferences)

## QUESTIONS TO STIMULATE DISCUSSION (new!):

- 1. THE PAPERS:** How much "tech" should the papers go? What audience would we go for? (add your own questions...)
- 2. THE GUIDELINES:** Are best-practice guidelines realistic? Is it worth thinking about it? What are the relevant points to be taken into account? How much can features of data management systems be generalized, and how much are they specific to the case? (add your own questions...)
- 3. THE NETWORK:** What would be the advantages of a networking approach? Would it be possible to find dedicated funding schemes?

## WORKSHOP PROGRAMME AND TIMELINE

<b>Time</b>	<b>What</b>	<b>Who</b>
8.40-8.50	Workshop opening	J. Hartog
8.50-9.10	Introduction	F. Cagnacci
<b>PART 1</b>	<b>BIO-LOGGED DATA MANAGEMENT AND SHARING: opportunities and challenges</b>	<i>Chairs: J. Hartog, H. Dettki</i>
9.10-9.50	<b>1) BIO-LOGGED DATA STORAGE &amp; USE</b>	F.Urbano/J.Hartog
9.10-9.30	1.1) Bio-logged data management: requirements and opportunities (F.U.) 1.1.1) Relation and Spatial Relational database: the natural solution 1.1.2) Spatio-temporal database: a future perspective	
9.30-9.50	1.2) Database data models: modelling the world (J.H.) 1.2.1) Sensors integration: different points of view, same objective 1.2.2) Environmental data integration: from "where and "what" to "why" 1.2.3) Bio-logged environmental data: informing the world	
9.50-10.00	<i>Discussion (&amp;coffee)</i>	
10.10-10.50	<b>2) BIO-LOGGED DATA FLOW</b>	H.Dettki/E. Fujioka
10.10-10.30	2.1) From sensors to databases: automated approaches (H.D.) 2.2) Data validation: Automatic filtering of "bad" data (H.D.) 2.3) Go with the flow (as simple as that?): the marine case. (E.F.)	
10.30-10.45		
10.45-11.00	<i>Discussion (&amp;coffee)</i>	
11.10-11.50	<b>3) BIO-LOGGED DATA SHARING</b>	S.Davidson/P. Taylor/E.Fujioka
	3.1) Data standards: building the interoperability (P.T.) 3.2) Data sharing and dissemination: Promoting collaboration (S.D., E.F.) 3.3) Web based tools: interfacing knowledge (S.D.) 3.4) One resource, different needs: managing users' access policy (P.T.)	
11.50-12.00	<i>Discussion</i>	
12.00-13.00	<i>Lunch</i>	

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<b>PART 2</b>	<b>SHOW CASES: Solutions and perspectives</b>	<i>Chairs: F.Urbano/P. Taylor</i>
13.00-13.15	WRAM/Lifewatch	<i>H. Dettki</i>
13.15-13.30	EURODEER	<i>F. Cagnacci</i>
13.30-13.45	<i>BirdLife Global Procellariform Tracking database</i>	<i>P. Taylor</i>
13.30-14.00	<i>Australian Antarctic Data Centre</i>	<i>D. Watts</i>
14.00-14.15	<i>OBIS/Seamap</i>	<i>E. Fujioka</i>
14.15-14.30	<i>Seaturtle/Wildlife Tracking</i>	<i>M. Coyne (remotely)</i>
14.30-14.45	MOVEBANK	<i>S. Davidson</i>
14.45-15.00	<i>Coffee Break</i>	
<b>PART 3</b>	<b>DISCUSSION AND OUTCOMES (see prospected outcomes above)</b>	<i>Chairs: F. Cagnacci/S. Davidson</i>
15.00-17.00	<i>The Tech side, the science side, the network (see prospected outcomes above)</i>	
	<i>Definition of working groups?</i>	
	<i>Closing remarks</i>	

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**List of speakers:**

<b>Surname</b>	<b>Name</b>	<b>Affiliation</b>	<b>Website</b>	<b>Contacts</b>
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