Standardizing data transfer from bio-logging sensors

Results of the Survey for Manufacturers

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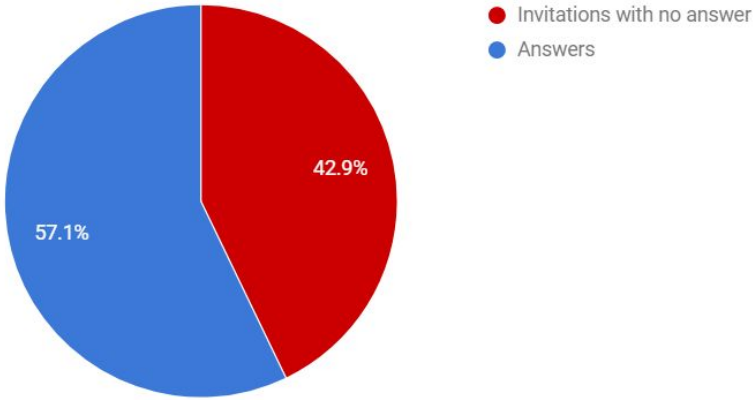
Goals of the survey

- **Explore opinions** of manufacturers about the possibility to develop and implement standards
- **Involve manufacturers** from the earliest stage of the process lead by IBLS
- **Promote participation** in the forthcoming working group
- **Collect feedback** about possible technical implementation
- **Identify critical issues** to be discussed at the workshop

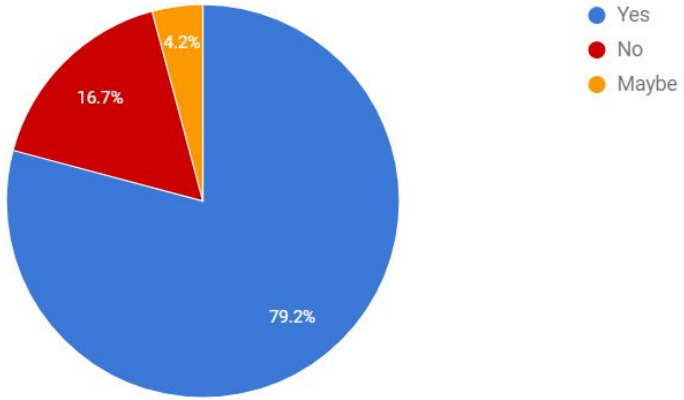
Participation in the survey

42 invitations sent

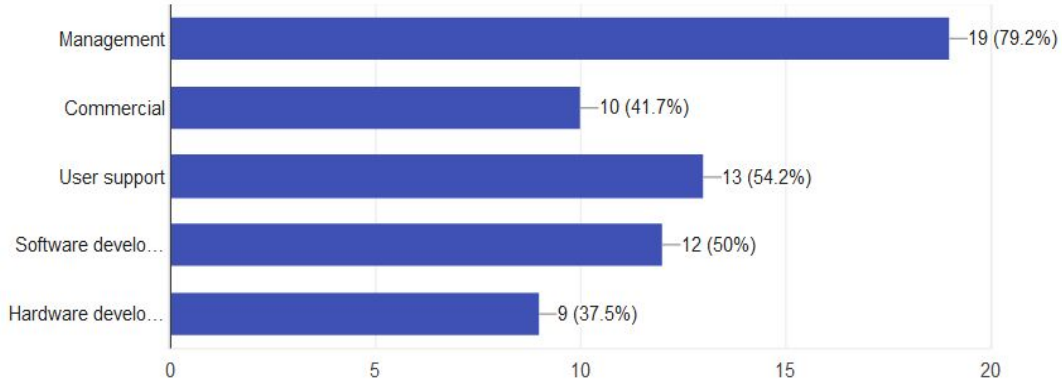


Are you interested in participating in the worshop?

24 responses

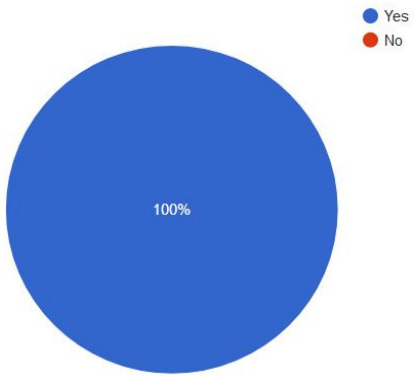


What is your role in the company?



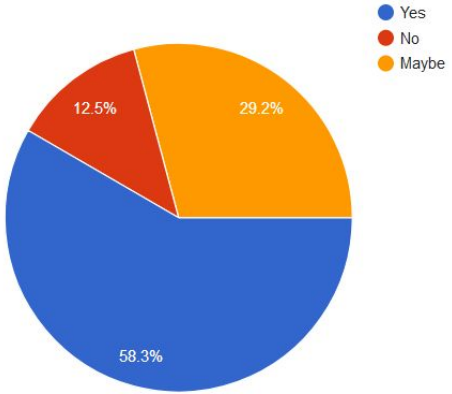
Would you like to receive updates from the working group?

24 responses



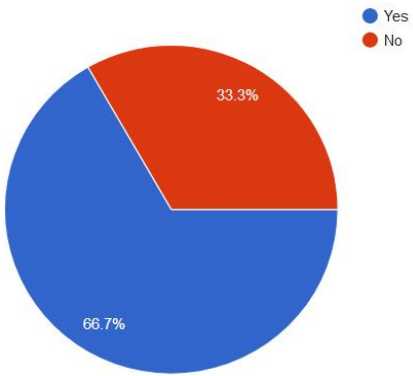
Are you interested in actively participating in developing standards for bio-logging data?

24 responses



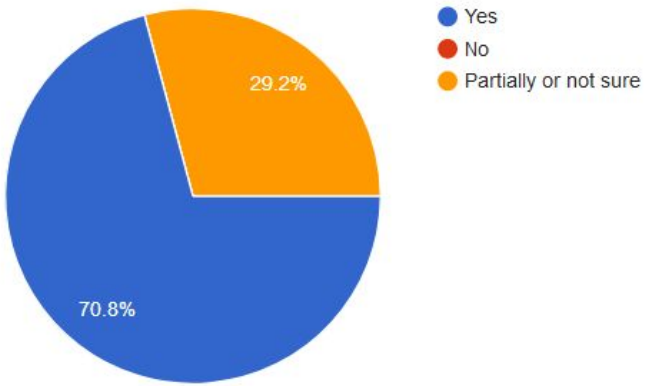
Are you interested in working with us to generate prototypes of standard templates?

24 responses



Do you think that data and metadata standards are an important issue in the bio-logging world?

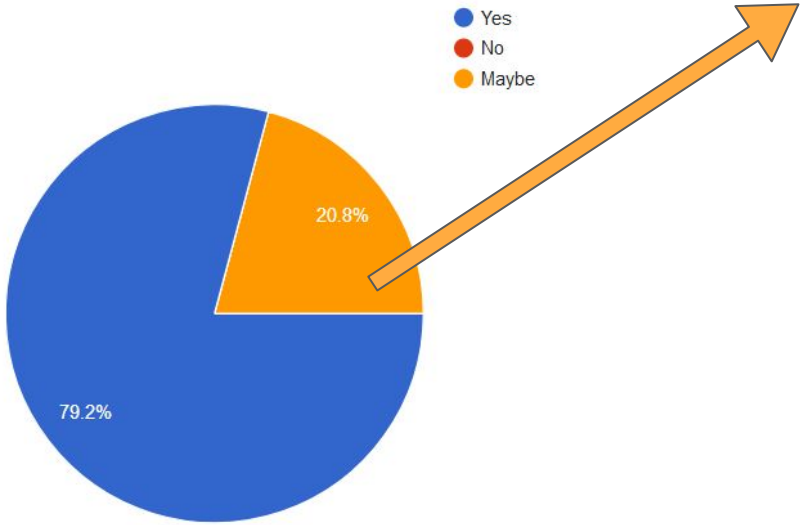
24 responses



Some comments from manufacturers about technical approaches for standards

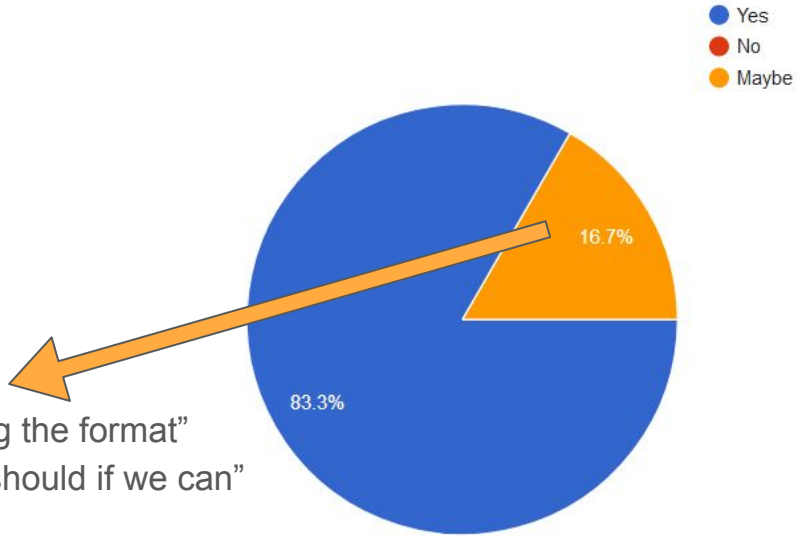
- “Should not cause deficiencies (memory, energy, ...)”
- “Flexibility to support new sensors”
- “Accommodate existing transmission schemes”
- “Based on international units”
- “Use JSON”, “Use of XML”
- “Use ascii files self-descriptive about the experiment”
- “Develop a common database schema where data can be easily submitted”

Would you consider taking actions to provide standardized metadata for devices and data terms?



- “Because there may be other limitations to be considered”
- “It depends on time and value to users”
- “If there is a reason and doesn't compromise performance”

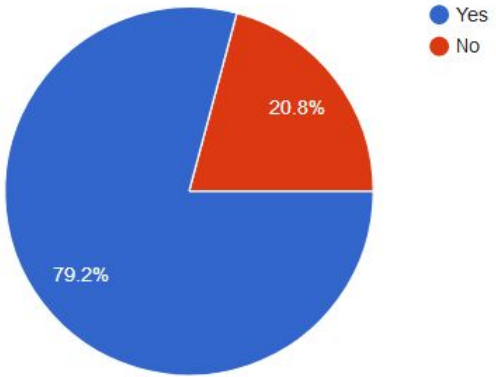
Would you consider to use a standard, machine-readable file format as an options to release data?



- “It depends on time and value to users”
- “We want to be part of the stakeholders deciding the format”
- “There are obvious reasons to conform, so we should if we can”

Does your company have any experience using community or industry standards for describing, formatting, or transferring data?

24 responses



What kind of experiences you had?

- JSON, GeoJSON, XML, KML, standard CSV
- Decimal degrees for lat/lon, UTC for time, ISO date
- “NMEA0183”
- “Adapt our DB file format (SQLite) for import through SQL calls”
- “Sending data between servers for requested institution”
- “We worked to create netCDF files from tag data”
- “Most used data formats, including Movebank”

Additional comments from manufacturers

- “No changes to sensors and to binary format used to store data internally”
- “Technical guidance for implementation of standards (source code, libraries, examples)”
- “There are already a number of standards proposed by many organisations”
- “We expect users to be able to format data”
- “SQL DB import directly is more adequate over .xml/.csv for large data sets”

Some ideas that emerge from the survey

1. **Positive attitude from manufacturers**
   “It would be useful to have a standard to refer to when developing products and software”
2. Need for a **common understanding and terminology** to clarify intent of standards
3. Standard must be **simple to implement** and support provided
4. **A single voice** for the whole user community (IBLS) with **clear requirements**
5. Working group with **users and manufacturers**