Animal Data Exchange Working Group Update

Co-Chairs: Robert Fourdraine and Bert van ’t Land
Status of Dairy Industry Technology

- Parlor systems
  - Milk weights, milking times, milk components

- Animal monitoring systems
  - Activity, Rumination, Health

- Milk diagnostics laboratories
  - Components, pathogens, pregnancy, diseases

- Genomic testing laboratories
Data Transfer Needs

• Modernize existing methods for data transfer
  • Volume of data (bigger farms)
  • Frequency of data transfer (monthly to weekly to daily)
  • Increase number of data items

• New data transfer methods
  • New data sources (new technologies)

• Increased user base needing data

• Developments in other groups
  (Health, sensors,..)
ADE WG

- Robert Fourdraine, USA CRI (Co-Chair)
- Bert van ’t Land, NL CRV (Co-Chair)
- Johannes Frandsen, DK Seges
- Beate Maassen-Francke, GER GEA
- Michael Lynch, IRL ICBF
- Harm-Jan van der Beek, NL Uniform-Agri
- Simon Jenkins, AUS Datagene
- Robert Moore, CAN Valacta
- Damien Pachoud, CH Datamars
- David Bleloch, UK Shearwell Data
- Andrew Cooke, NZ Rezare Systems
- Sarah Goerlich, CH Qualitas Ag
- Sven Schierenbeck, GER VIT
- Juliette Leclaire, FRA Institut de l'Elevage
- Freddie Ruijser, NL, Lely
- Lars Bergmann, SWE, DeLaval
- Mark Doornink, USA, Valley Ag Software
Sub Groups:

• Semantics/Ontology
  • Responsible for maintaining and enhancing a worldwide data dictionary

• Technical Implementation
  • Standardize data exchange in XML and/or JSON API’s

• Outreach
  • Tasked with promoting the standards and make people aware and stimulate new implementation.
Semantics/Ontology

• Extensive resource developed over the past 5 years

• Request was to update to JSON/REST Interfaces before adding more information

• Request to be flexible to adopt data from for new technologies

• New desired Services:
  • Activity
  • Rumination
  • Feed/concentrate
  • ....
Technical Implementation

• Milking is finalized and ready to release

• Registration had been discussed, and is soon to be finalized

• Reproduction has been discussed:
  • Investigate heat detection more in detail
  • Parturition and dry off still to be discussed
Outreach

• Need to cast a wider net and obtain greater participation
  • Understand the current status
  • Understand intentions of the various groups
  • Address any concerns

• Survey of interest groups to determine what the specific concerns are and what can be done to alleviate those.

• From the respondent none indicated they would never implement the proposed standards
  • Early adopters
  • Those waiting for technical standards
  • Phased in approach
Main concern: Collaboration process

• Innovation & Standardization are often in conflict
  • Agenda ICAR WG not insync with the different projects all over the world
  • We need collaboration instead of long waiting periods

• Seen a positive change in the past year, many realize building proprietary interfaces between systems take time and resources.

• Possible solution: Open source development, sharing the work
  • Efficient handling of expansion proposals/ new branches
    ▪ Users must be able to add concept definitions themselves unofficially until they are merged to the officially validated version and tightened up to the standards
    ▪ contain definitions for sensor data as well as definitions for more static data (transaction messages).
    ▪ have good import and export possibilities (XML, YAML, SENML,..)
Questions?