



AEM Ag Executive Committee, Milwaukee



AGRICULTURAL INDUSTRY  
ELECTRONICS FOUNDATION

# Agricultural Industry Electronics Foundation AEF

## An Initiative of Agricultural Industry to foster Electronic Standards

**Rainer Hofmann**  
Chairman AEF

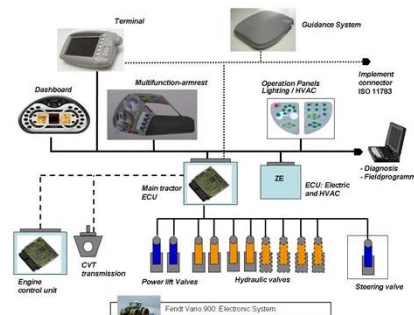
## Topics

- Why did Ag Industry found an organisation for electronics ?
- AEF - organisation and objectives
- North American aspects
- Project teams and project scope
- Future



# Electronic in Ag machinery --- last 20 years

- **Control** of mechanical systems
- Operator **Control** Interface
- **Control** Network
- Automatic **Control**



## Electronic in Ag machinery --- next 20 years

- **Communication** between coupled Machines  
Control and Data Communication Interface  
'ISOBUS' (ISO 11783)
- **Communication** Machine to Management Systems
- **Communication** Machine to Machine in Fleets
- **Electric Power** (High Voltage)



## Electronic in Ag machinery --- next 20 years



***Agricultural Machinery Manufacturers have to communicate and to cooperate to make electronic interfaces compatible, reliable and beneficial for the customer***



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## AEF – the Organisation

### Agricultural *Industry* Electronics Foundation

- Founded: 28. Oktober 2008
- Initiative of agricultural manufacturer companies and their associations
- Registered as e.V. in Frankfurt, Germany



International organisation for implementation of standards in electronic systems in agricultural machinery



## AEF – the Organisation

**Foundation Members = Funding Members = Steering Committee**



\*) Krone is representing CCI .e.V (Competence Center ISOBUS) and their member companies

**General Members:** more than 140 Members

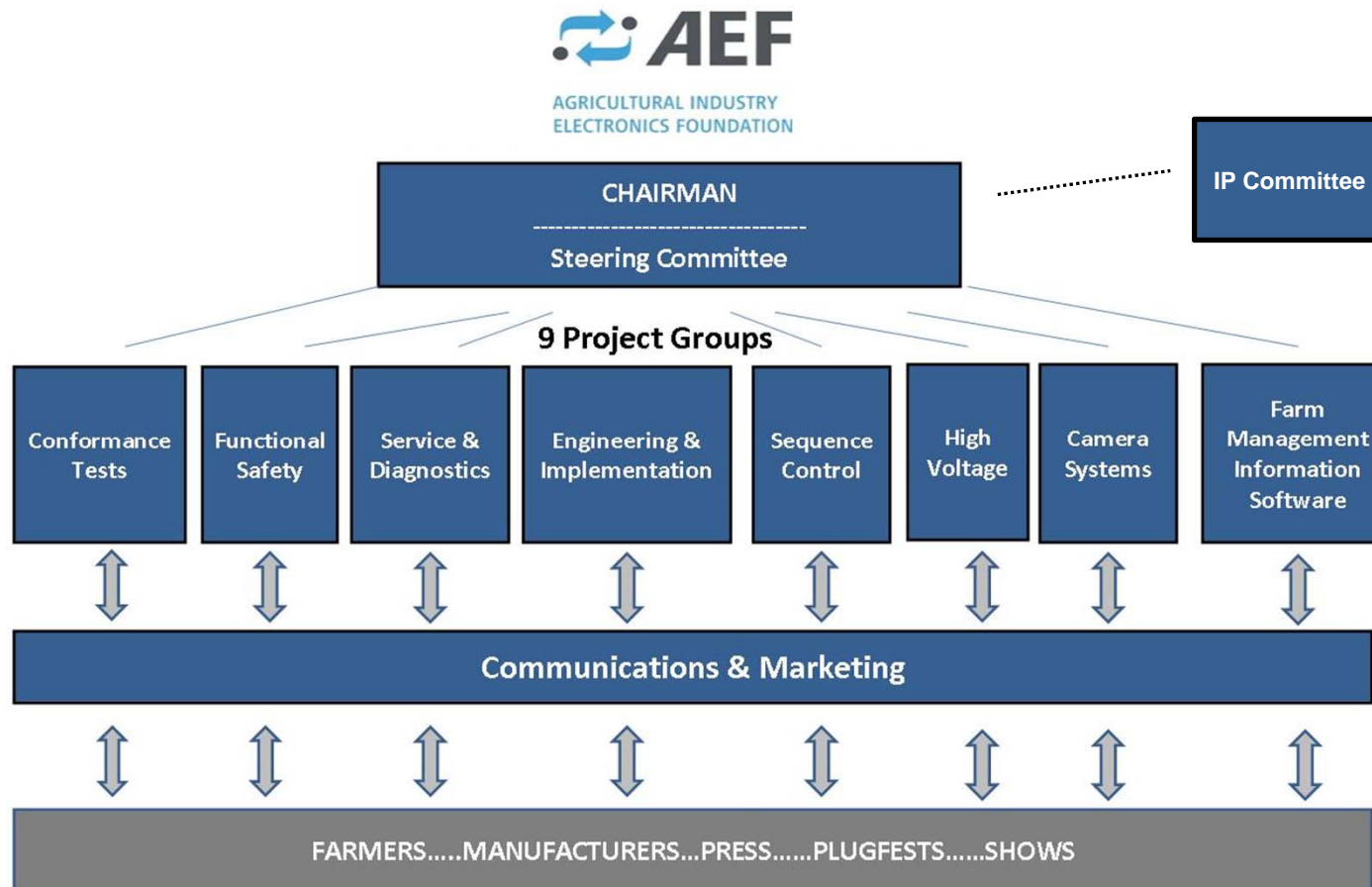


MEMBERS OF AEF  
MANUFACTURERS OR INSTITUTIONS

- develop hard- and software
- carry out internal compatibility tests
- market ISOBUS products

Machine manufacturer:	26
System manufacturer:	23
Supplier:	25
Software Provider:	6
Others:	34

# AEF – the Organisation





## AEF – short History

**2008**

Small  
membership  
No products

Founder Member  
Contribution

**2011**

>140 members  
Multiple Product  
development almost  
completed

Founder Member  
Contribution

**2012**

Service & Diagnostics  
database launched  
Conformance test launched  
AEF require some full time  
“employees”

- Founder Member Contribution
- General Member Service Charge
- Database License fee
- Conformance test license fee
- Sales of guideline documents to non members

## AEF – the Organisation

AEF does no standardization work  
but prepare technical concept and functionality



ISO committees do formal standardization



AEF takes care for full implementation of formal standards  
according to industry and their business processes

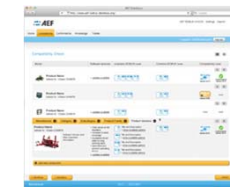
## AEF – Service for Members

- Industry aligned **Guidelines** for agricultural industry how to implement electronic standards for **Marketing, Service, Engineering, Safety**
- Organisation of international and industry wide cross **Cooperation**: e.g. Engineering ‘Plugfests’
- International test and **Certification** processes



CCISOBUS

- **Information Platform** for dealers, service, customers:  
AEF ISOBUS database
- **Reconciliation** of IP and patents for industry standards





## AEF – North American Aspects

- Engineering Organisation of AEF is well established in North America: e.g. project team E&I ,vice team leader‘; NTTL plugfest
- Marketing and Communication of AEF is not well established in North America
- South America is a growing market for electronic applications in Ag machinery – expecting support from established markets like NA or EU; closer relations between South America and North America need a good representation of AEF in USA
- What is essential in Ag Industry Electronics in North America in the next future and is not covered by AEF?
- What should AEF provide for North America especially?

## We need your involvement (!)

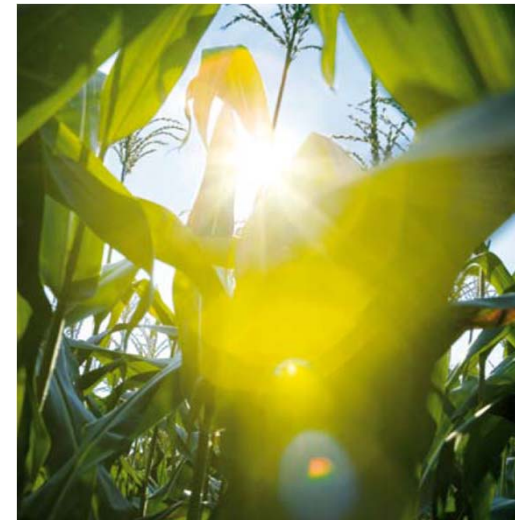
- Different users (customers) and markets – different demands – different requirements (?)
- Networking .... to cover complex subjects
- Worldwide compatibility of solutions

More Information:

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Thank you very much for your attention

