A Conceptual ER for **ISU Cattle DataBase**
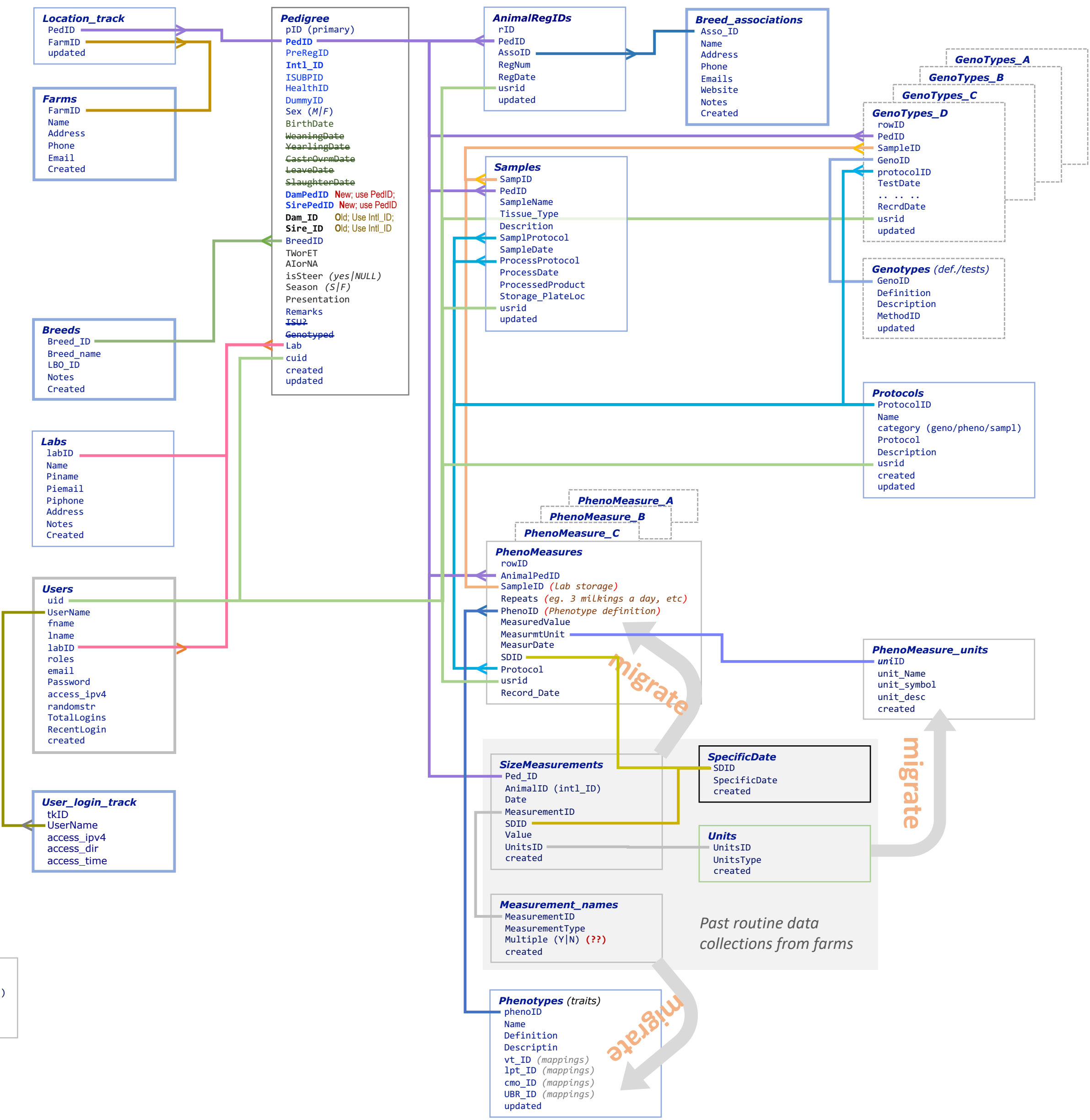
Default values

Pedigree named fields:

1. PedID: Pedigree ID - Animal primary unique identifier
2. ISUBPID:
3. PreRegID: temporary pseudo "intl_ID" by a temp serial together with 'ISU' after essential parts of an Intl_ID; To be replaced by Intl_ID.
4. HealthID:
5. DummyID:
6. Data ownership: Data "ownership" is represented by BOTH `labID' and `UserID' because (1) responsibility will be traceable to individuals; (2) personel changes – eventual owner is `lab'. For this reason when a user works for both labs, s/he needs to have 2 separate accounts.
7. DamPedID/SirPedID: Added in 2024, replacing (old)Dam_ID/Sir_ID which use Intl_IDs. The current DamPedID/SirPedID are looked up and filled by PedID composed following above rules matching their Intl_IDs.
8. SpecificDates:
   • Weaning date
   • Yearling date
   • Slaughter date
   • Castration date
9. Flag - Controlled vocabulary

Basic structural types:

Styles of table box borders:

1. Thick lines: key info tables.
2. Solid lines: existing tables
3. Dotted lines: conceptually proposed (not yet implemented)
4. Gray lines: existing tables
5. Black lines: existing and potentially to improve
6. light cyan lines: newly created tables since year 2000.

Fit data flows:

Location_track
- PedID
- FarmID
- updated

Farms
- FarmID
- Name
- Address
- Phone
- Email
- Created

Breeds
- Breed_ID
- Breed_name
- LBO_ID
- Notes
- Created

Labs
- labID
- Name
- Piname
- Piemail
- Piphone
- Address
- Notes
- Created

Users
- uid
- UserName
- fname
- lname
- labID
- roles
- email
- Password
- access_ipv4
- randomstr
- TotalLogins
- RecentLogin
- created

User_login_track
- tkID
- UserName
- access_ipv4
- access_dir
- access_time

Controlled vocabulary
- vocID
- scope (pheno/geno/farm/etc)
- vocabulary
- meaning
- Record_Date

Pedigree
- pID (primary)
- PedID
- PreRegID
- Intl_ID
- ISUBPID
- HealthID
- DummyID
- Sex (M/F)
- BirthDate
- ~~WeaningDate~~
- ~~YearlingDate~~
- ~~CastrOvrmDate~~
- ~~LeaveDate~~
- ~~SlaughterDate~~
- DamPedID   New; use PedID;
- SirePedID   New; use PedID
- **Dam_ID**   Old; Use Intl_ID;
- **Sire_ID**   Old; Use Intl_ID
- BreedID
- TWorET
- AIorNA
- isSteer (yes|NULL)
- Season (S|F)
- Presentation
- Remarks
- ~~ISU?~~
- ~~Genotyped~~
- Lab
- cuid
- created
- updated

AnimalRegIDs
- rID
- PedID
- AssoID
- RegNum
- RegDate
- usrid
- updated

Breed_associations
- Asso_ID
- Name
- Address
- Phone
- Emails
- Website
- Notes
- Created

Samples
- SampID
- PedID
- SampleName
- Tissue_Type
- Descrition
- SamplProtocol
- SampleDate
- ProcessProtocol
- ProcessDate
- ProcessedProduct
- Storage_PlateLoc
- usrid
- updated

GenoTypes_A / GenoTypes_B / GenoTypes_C / GenoTypes_D
- rowID
- PedID
- SampleID
- GenoID
- protocolID
- TestDate
- ... .
- RecrdDate
- usrid
- updated

Genotypes (def./tests)
- GenoID
- Definition
- Description
- MethodID
- updated

Protocols
- ProtocolID
- Name
- category (geno/pheno/sampl)
- Protocol
- Description
- usrid
- created
- updated

PhenoMeasure_A / PhenoMeasure_B / PhenoMeasure_C

PhenoMeasures
- rowID
- AnimalPedID
- SampleID (lab storage)
- Repeats (eg. 3 milkings a day, etc)
- PhenoID (Phenotype definition)
- MeasuredValue
- MeasurmtUnit
- MeasurDate
- SDID
- Protocol
- usrid
- Record_Date

PhenoMeasure_units
- unitID
- unit_Name
- unit_symbol
- unit_desc
- created

migrate

Past routine data collections from farms

SizeMeasurements
- Ped_ID
- AnimalID (intl_ID)
- Date
- MeasurementID
- SDID
- Value
- UnitsID
- created

SpecificDate
- SDID
- SpecificDate
- created

Units
- UnitsID
- UnitsType
- created

Measurement_names
- MeasurementID
- MeasurementType
- Multiple (Y|N) (??)
- created

Phenotypes (traits)
- phenoID
- Name
- Definition
- Descriptin
- vt_ID (mappings)
- lpt_ID (mappings)
- cmo_ID (mappings)
- UBR_ID (mappings)
- updated