

# Development of GenerationCP domain models

Passport data

# Passport data

## Overview

- Basic concepts
- Public models and ontologies available
- Public models to be incorporated
- International partners
- Suggested approach

# Passport data

## Basic concepts

*“....provide the basic information used for the general management of the accession (including registration at the genebank and other identification information) and describe parameters that should be observed when the accession is originally collected.”*

(From IPGRI and COMAV. 2004. Descriptors for Pepino (*Solanum uricatum*).

# Passport data

## Basic concepts

- What
- Where
- When
- Who

# Passport data

## Basic concepts

- What
- Where
- When
- Who

### **Name**

Taxon  
Crop name  
Accession name

### **Identifiers**

Accession number  
Collecting number  
Alternative ID's

### **Status**

Biological status  
FAO in trust  
Core collection

# Passport data

## Basic concepts

- What
- Where
- When
- Who

### Collecting loc.

Latitude  
Longitude  
Lat\_precision  
Long\_precision  
Elevation  
Country  
Province  
Country  
Locality

Collecting source

### Pedigree

Parents  
Type of genesis

# Passport data

## Basic concepts

- What
- Where
- When
- Who

Collecting date  
Acquisition date

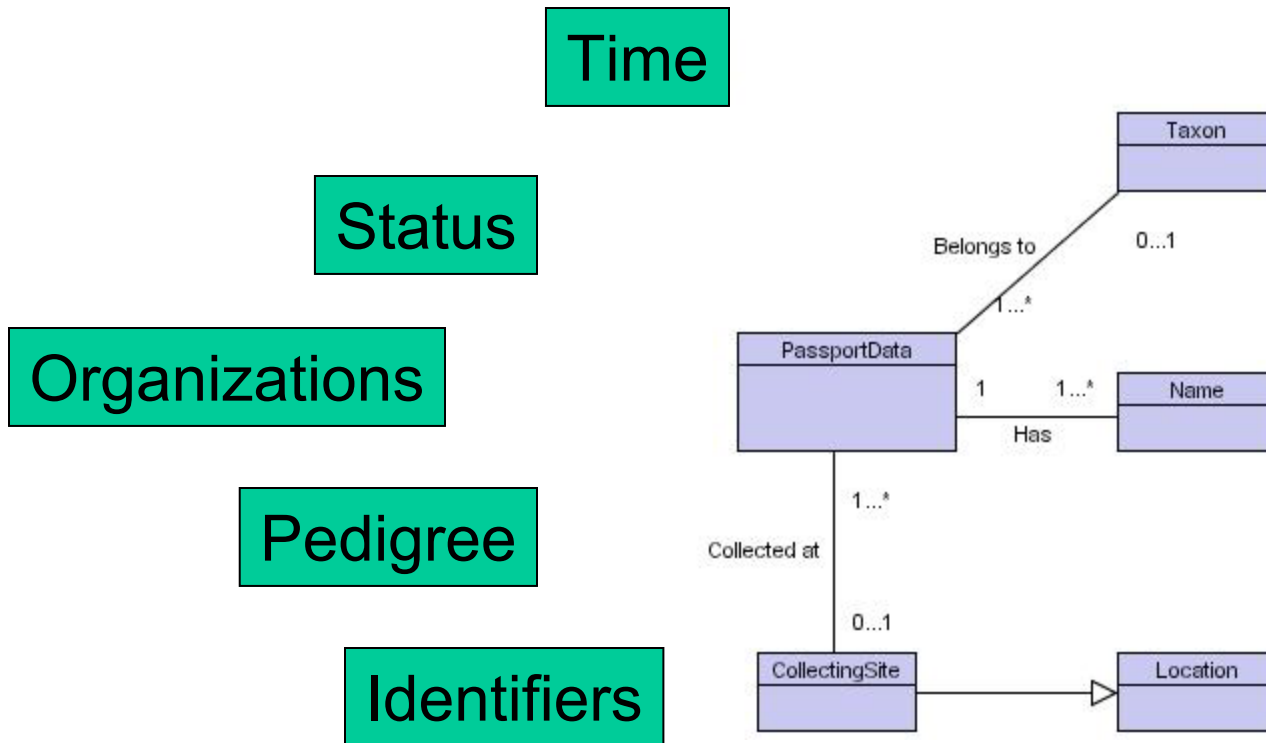
# Passport data

## Basic concepts

- What
  - Where
  - When
  - Who
- Holding institutes/ collection  
Safety duplication holding institute  
Collectors  
Donors  
Breeders

# Passport data

## Basic concepts



# Passport data

## Public models and ontologies available

- **Darwin Core** (set of data element definitions designed to support the sharing and integration of primary biodiversity data)
- **Access to Biological Collections Data** (evolving comprehensive standard for the exchange of data about specimens and observations (primary biodiversity data))
  - In use by **GBIF** and **BioCASE**
- **FAO/IPGRI Multi-crop Passport Descriptors** (set of data element definitions to support the sharing and integration of common passport data)

# Passport data

Public models and ontologies available

## **FAO/IPGRI Multi-crop Passport Descriptors:**

- Established since 1997
- Implemented by ECP/GR Crop Networks, EURISCO, SINGER
- EURISCO version used as reference for the development of the PlantGeneticResourcesUnit of ABCD

# Passport data

Public models to incorporate

## **FAO/IPGRI Multi-crop Passport Descriptors**

- Established and mature standard for common accession-level passport data

## **Access to Biological Collections Data (ABCD)**

- Builds on MCPD (including EURISCO ext.) for PlantGeneticResourcesUnit
- Has started to define relations between terms as a first step towards ontology

# Passport data

## Public models to incorporate

### **FAO/IPGRI Multi-crop Passport Descriptors and the Generation Challenge Programme**

- CP needs better defined pedigree system to support sophisticated pedigree analysis (linkage with IRRI led modeling activity)
- CP needs more suitable format for GIS applications to facilitate spatial analysis (linkage with CIP-led modeling activity)
- Accommodate linkage with sub-accession level datasets

# Passport data

## International partners

- SINGER
- EURISCO
- GRIN
- IPK
- CODATA/TDWG Task Group on Access to Biological Collection Data

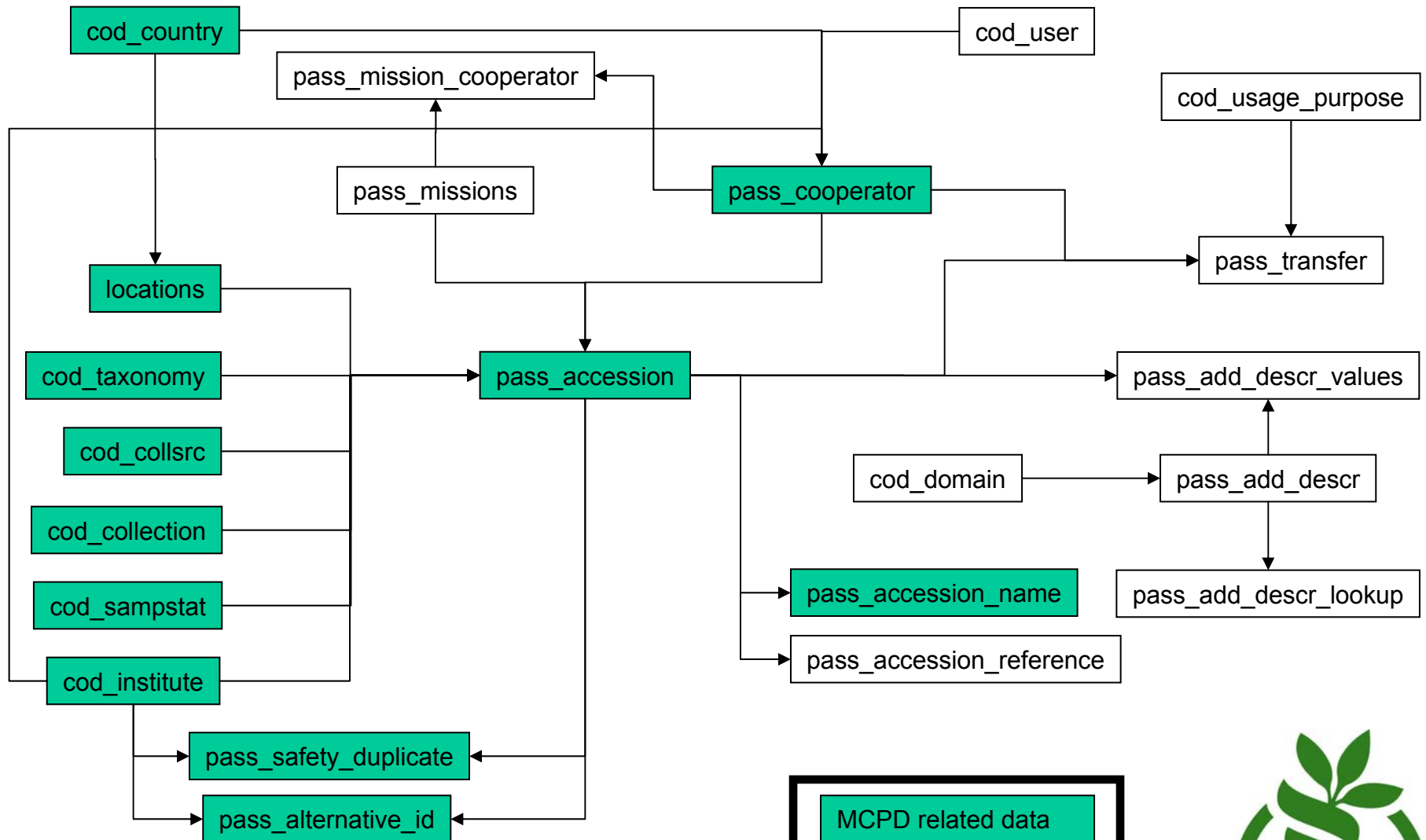
# Passport data

## Engaging Partners

### SINGER

- Nine CGIAR Centres partners in SINGER **and** the GenerationCP
- Proposal for new SINGER replication structure (Aleppo 13-17 Feb 2005)
- Core passport data follows MCPD

# Proposal for SINGER Passport data-model



CP Meeting Wageningen 14-16 Feb 2005 (TH)



# Passport data

## Engaging Partners

### EURISCO

- National inventories
  - Sofar only passport data
- Adopted MCPD
  - Some EURISCO-specific descriptors were added
- Phase II for EURISCO in planning stage
  - Expansion to characterization, evaluation data and eventually molecular data planned
- CP activities very relevant for this group!
  - Strategy to engage should include characterization, evaluation and molecular data domains

# Passport data

## Engaging Partners

### IPK

- Involved in EURISCO
- Actively involved in development of ABCD  
PlantGeneticResourcesUnit

### CODATA/TDWG Task Group on Access to Biological Collection Data

- Development of ontology for primary biodiversity data (collection and specimen data)

# Passport data

## Engaging Partners

### GRIN

- Can already map to MCPD
- Could have more interest in how CP develops domain models for genetic and phenotypic data
- Strategy to engage GRIN is to include genetic and phenotypic data models

# Passport data

## Suggested approach

### Phase I (- April 2005)

- Coordinate with IRRI on pedigree model
- Coordinate with CIP on location model
- Consensus **with CP partners** on Passport data needed (elements and definitions)
- Consensus Passport data to serve as input for “Template Task”

### Phase II (May-Dec 2005)

- Build consensus **with external partners** to develop broad support for formats and models
- Develop full Passport domain model

