

# Onto Match Game

Guillem Anaïs,  
with contributions of O. Marlet and G. Bruseker

Session: Search and Learning Application Software Presentations  
59th joint meeting of the CIDOC CRM SIG, 52nd FRBR/LRMoo SIG and  
ISO/TC46/SC4/WG9

24-27 September 2024, Plovdiv, Bulgaria



# What is OntoMatch Game?

Online resource: <https://ontomatchgame.huma-num.fr/>

Git repository: <https://gitlab.huma-num.fr/masa/cidoc-card-game/>

Objective: Ontology (CIDOC CRM and other ontology models)  
learning/teaching

Modality: serious game

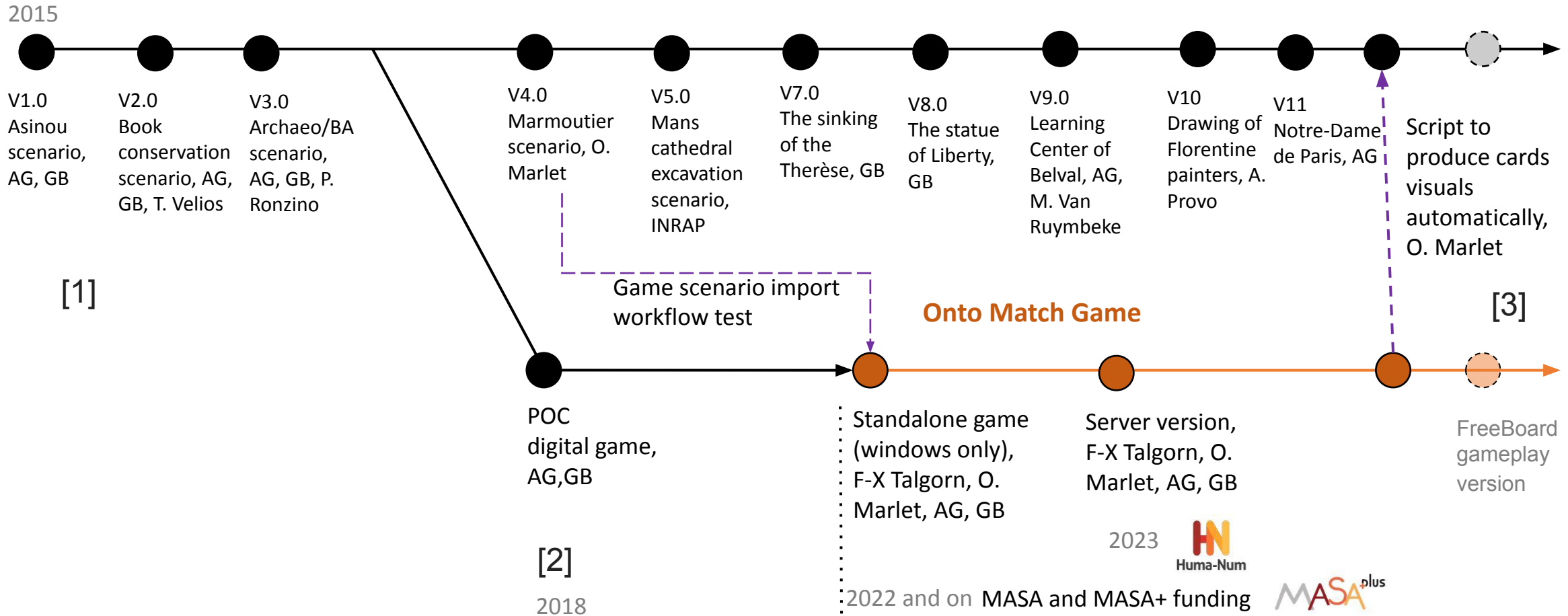
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# Overview of evolution:

relations to CIDOC CRM Game and versions

## CIDOC CRM Game



[1] Guillem, Anais, and George Bruseker. "The cidoc crm game: A serious game approach to ontology learning." The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XLII-2/W5, 2017 26th International CIPA Symposium 2017, 28 August–01 September 2017, Ottawa, Canada. Vol. 42. 2017.

[2] Guillem, Anaïs, George Bruseker, and Nicola Lercari. "Learning through doing: an online game for appropriating ontological modelling methodology." CAA Tübingen 2018. 2018.

[3] <https://ontomatchgame.huma-num.fr/papercards/>

# Onto Match Game:

main game interface

game information:  
-game scenario name,  
-chapter/lesson,  
-score

side panel:  
game instructions and  
explanations

**RIGNY FR** **SCORE**  
**INSTANCIATION (4)** **0 / 180**

**Evaluation sanitaire** 1 / 9

Chaque ossement est concerné par une évaluation sanitaire permettant de déterminer une éventuelle pathologie.

Pour ce défi, trouve les bonnes propriétés pour représenter les liens entre le l'ossement, l'évaluation sanitaire et la pathologie.

**E20** Biological Object

**E14** Condition Assessment

**E26** Physical Feature

**P34i** was assessed by  
SUPERPROPERTIES & SUBPROPERTIES  
^ P140i was attributed by  
P34i WAS ASSESSED BY

**P141** assigned  
SUPERPROPERTIES & SUBPROPERTIES  
^ P141 ASSIGNED  
v P35\_has\_identified  
v P37\_assigned

**I15** OSSEMENT  
humérus gauche

**I16** ÉVALUATION SANITAIRE  
(recherche d'anomalies)

**I17** PATHOLOGIE  
Types de fractures

VALIDER SUIVANT RÉESSAYER INDICE

ontology cards

board

instance cards

# Onto Match Game:

game interface - landing page/ login

WELCOME TO ONTOMATCHGAME!



Semantic Data Representation should let you generate, share and consume Cultural Heritage data with colleagues around the world, to ask and answer questions against more data and more integrated knowledge nets.

But to get there, you need to learn how to read and write semantic data in the first place. That's where OntoMatchGame comes in. If you are interested in learning about ontology, semantics and how to apply them to real cultural heritage data, then the OntoMatchGame has been designed for you.

Your Email

Enter a valid email address

Your password

Password linked to email address

Forgot your password?

OK

Don't have an account?

CREATE AN ACCOUNT



- user login
- user account creation
- language interface setting
- landing page
-

# Onto Match Game:

game interface - game scenario selection

HELLO ANAIS !

Last played: Marmoutier FR/Base des ontologies/2

Continue

Choose a scenario

Choose

See my statistics

See stats

Leaderboard

Ranking

Reset game data and start over

Reset

Quit game

Quit

More info

Full credits

# Onto Match Game:

game interface - game scenario selection

Scenario search panel

The screenshot shows the 'SCENARIO SELECTION' interface. On the left, there are three filter panels: 'Ontology' with 'CIDOC CRM' checked and 'Ric-O' unchecked; 'Topics' with 'Archeology', 'Architecture', 'Archive', 'Art', 'Conservation', and 'Ethnology' all checked; and 'Language' with 'Français' and 'English' both checked. The main area, titled 'List of scenarii', displays three scenario cards. The first card is 'Marmoutier FR - [Français]' with a 'Detail' button and a description 'Apprends les bases du CIDOC CRM avec les fouilles archéologiques de Marmoutier'. Below the description are six keyword tags: 'Histoire', 'Archéologie', 'Patrimoine culturel', 'CIDOC CRM', 'MASA', and 'Huma-Num'. The second card is 'Marmoutier EN - [English]' with a 'Detail' button and a list of three chapters: 'Ontology basics' (What is an ontology?, 0%, Play), 'CIDOC CRM Basics' (How is structured CIDOC CRM?, 0%, Play), and 'Instance modelling (1)' (Mapping an instance to CIDOC class, 0%, Play). Below the chapters are five keyword tags: 'History', 'Archaeology', 'Cultural heritage', 'CIDOC CRM', 'MASA', and 'Huma-num'. The third card is 'St-Cosme FR - [Français]' with a 'Detail' button and a description 'Modélise l'anthropologie funéraire du site du prieuré St-Cosme avec le CIDOC CRM'. A 'BACK' button is located at the bottom left of the interface.

Game scenario  
>chapters

Scenario key words



# Architecture

- Database: SQL
- Server: HumaNum server
- Application: Unity (full web version planned)
- Data files:
  - XML (ontology);
  - JSON (scenarii)

# Functionalities

- User login (RGPD)
- Game scenario search by keywords selection
- Ontology models import (xml)
- Ontology models updates following the ontology evolution
- Game scenario import (json)
- Multilingual interface
- Possibility to add the game scenarii in different languages
- Gameplay: mapping exercise
- Score
- Try, Error, Hints
- Cards manipulation

# Future developments

- More CIDOC CRM scenarii to support teaching/learning activities
- Scenarii with other ontologies: pedagogical material
- Game mode: free board play: pedagogical material
- Card sorting and interaction improvement
- Improving the learning experience (scenario design, hints and documentation): UX/UI and game design
-

# Thank you for your attention

## Onto Match Game presentation

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