Presentation of :
Nicolas Rempulski

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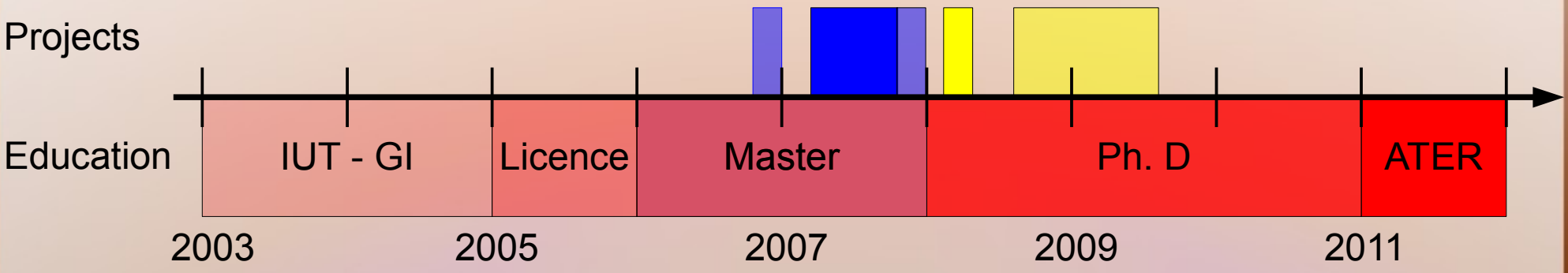
Curriculum / Cursus

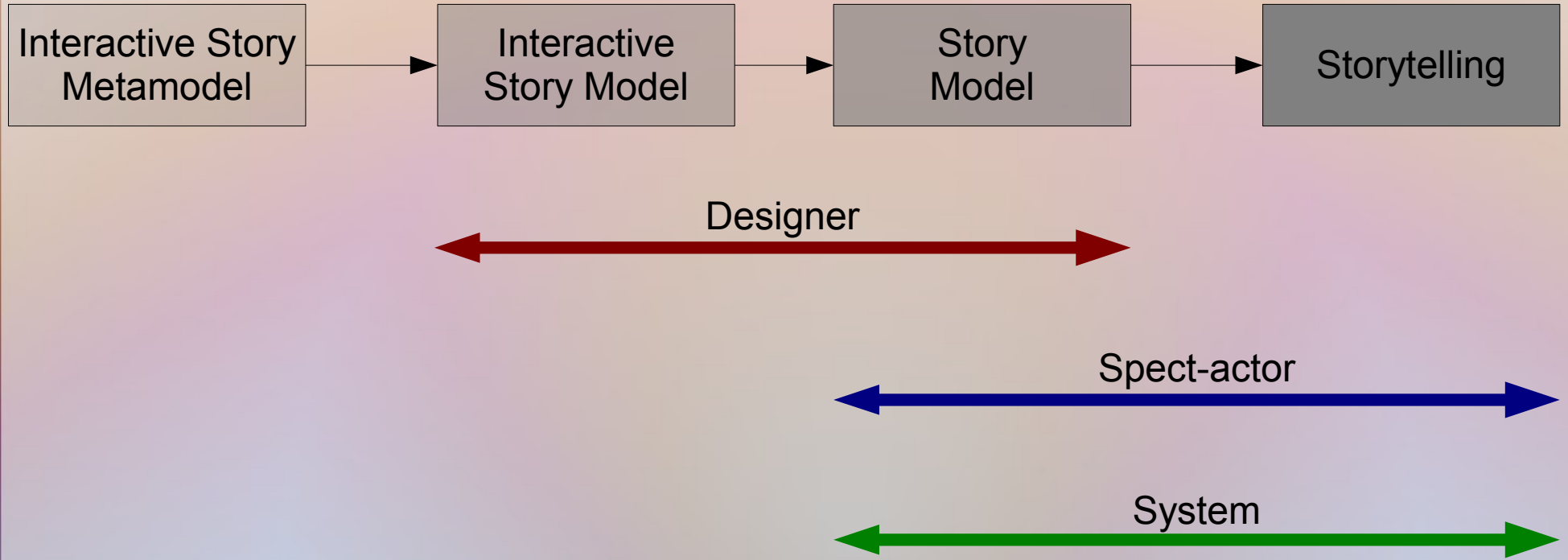


Academic		Industrial	
	Research trainee		eArts Shanghai
	Research engineer		ANR Project PLUG

Research topic / Sujet de recherche

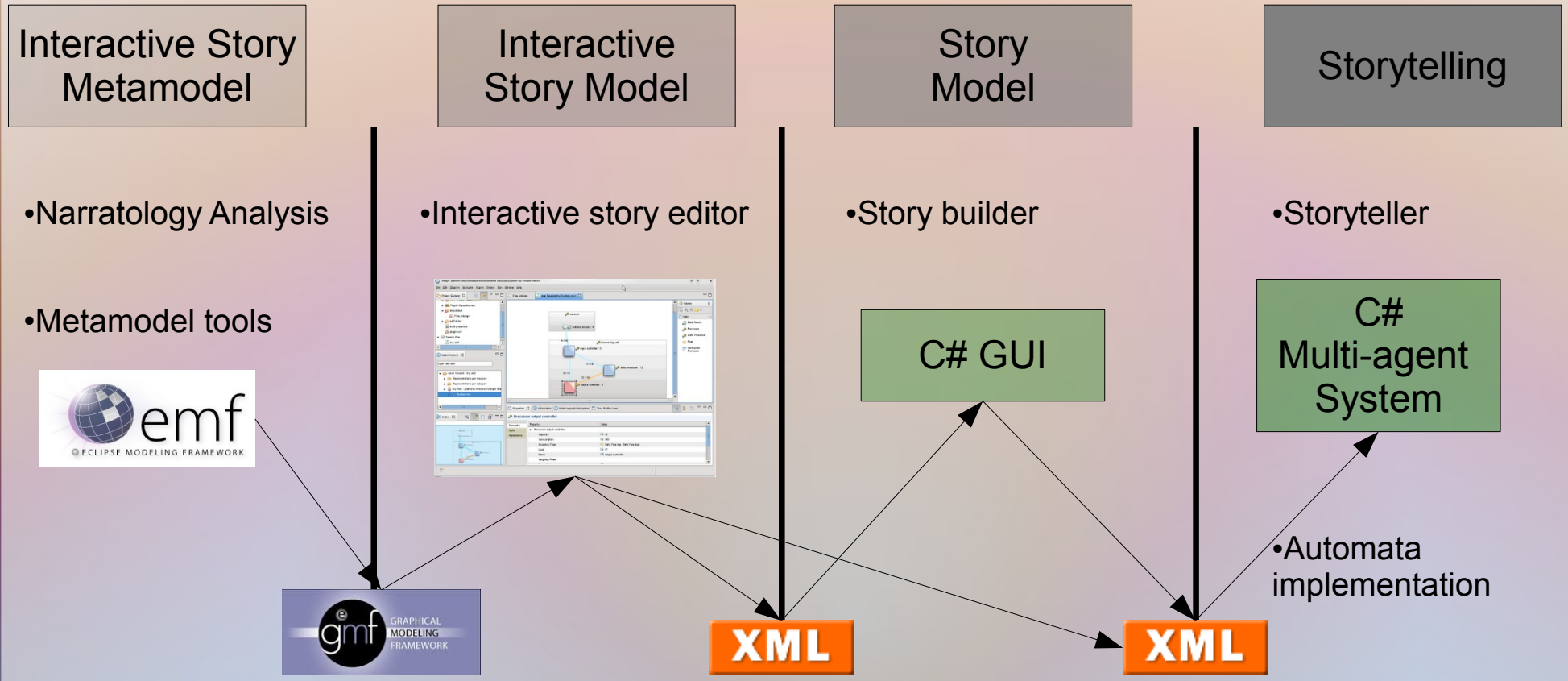
- *Goals*

Interactive Storytelling Modelling and Execution



Research topic / Sujet de recherche

- *Needs*



Skills / Compétences

- Model
  - MDE
    - Eclipse plug-ins for modelling (emf, gmf, eugenia, …)
  - Automata
    - Model with automata
    - Model-checking and verification algorithms
- Development
  - Video Game Related
    - Game Engine (Unity, XNA, …)
    - IA algorithms
  - Languages
    - Mainly C# & Java

Confidence
Low
OK

Questions ?

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November, 24, 2011

L3i Doctorial & Engineer Workshop

PHAM Phuong Thao

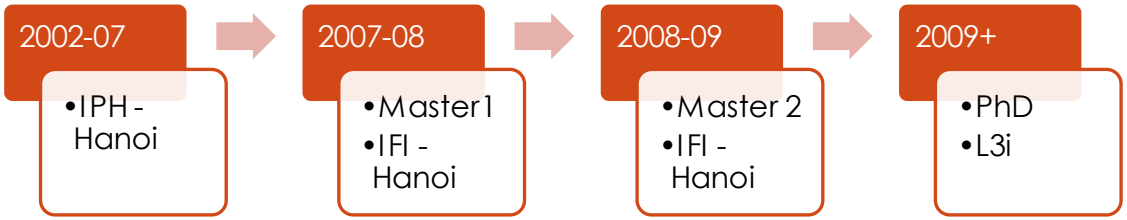
&

Fabrice TRILLAUD

Curriculum

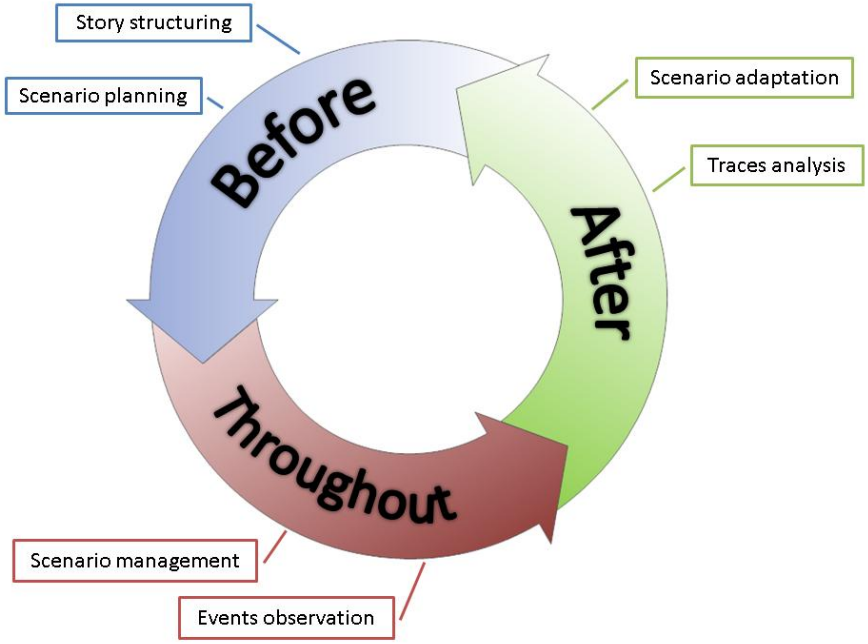
- Fabrice

- Thao



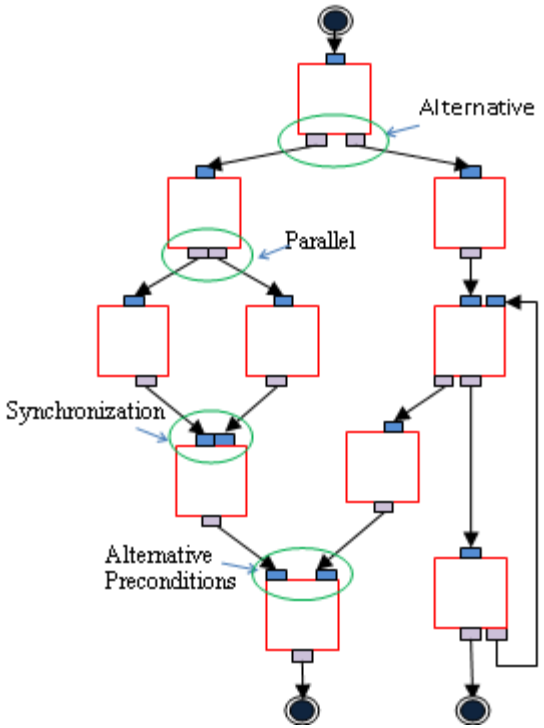
Adaptive Scenario

- Control of interactive applications using a 3-step lifecycle



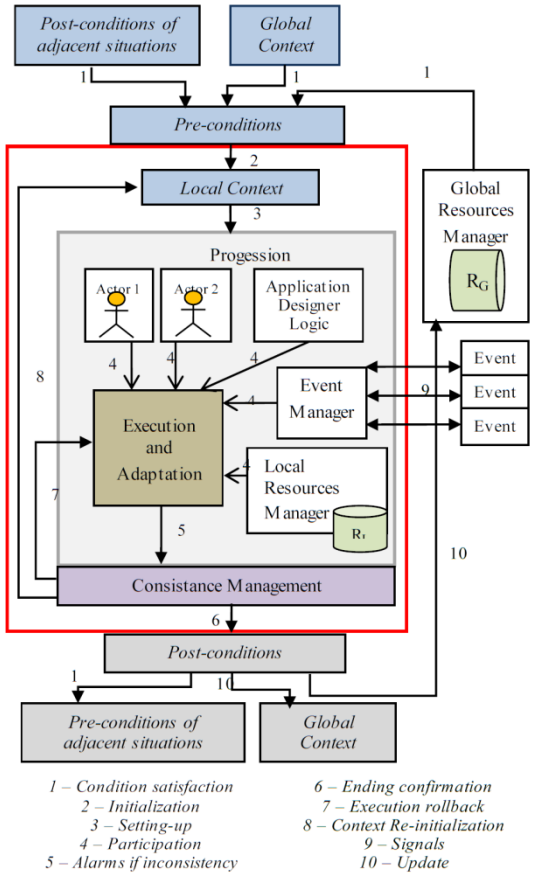
Situation-based Scenario

- Define generic adaptive scenarios using situations



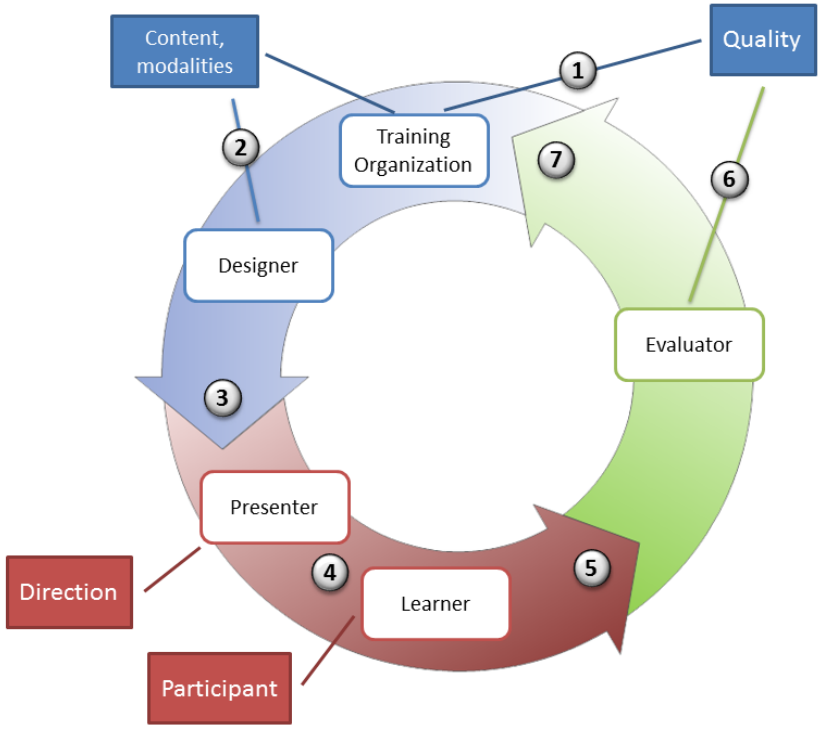
Elementary Situation

- Basis narrative unit: Scenario representation and plot direction
- Consistency Magement Pattern: Fault-tolerance inspired works - how to avoid or correct inconsistencies?



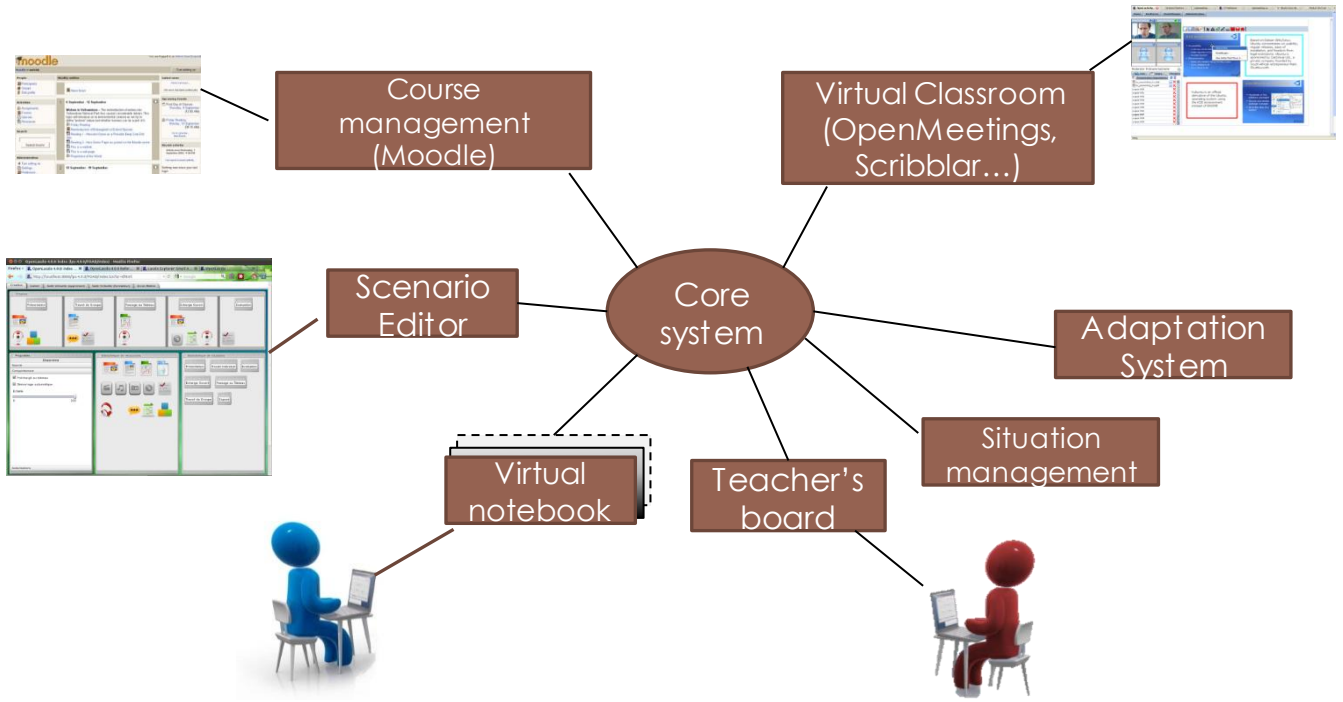
Online Distant Learning

- Apply the 3-step cycle to ODL
  - Actors?
  - Roles?



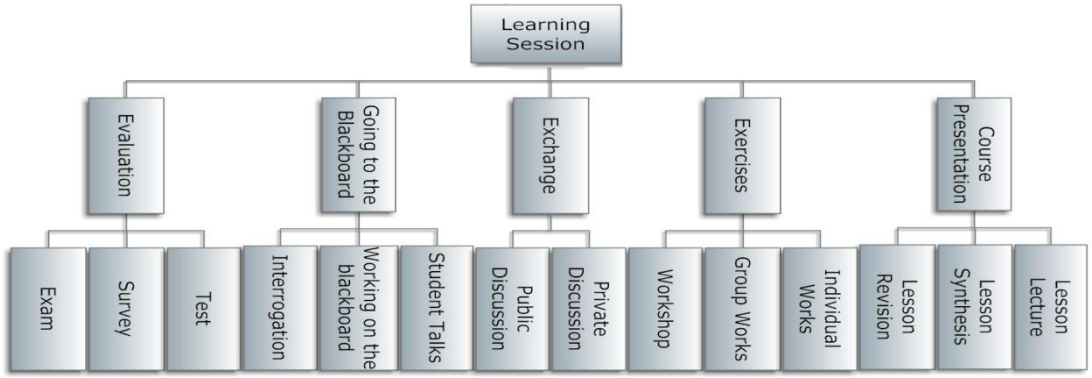
System Architecture

- Define an architecture to support interactions and execution of scenarios

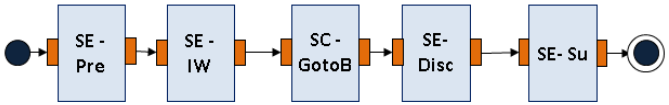


ODL Situations

- Structure in-class lectures into activities, and into situations

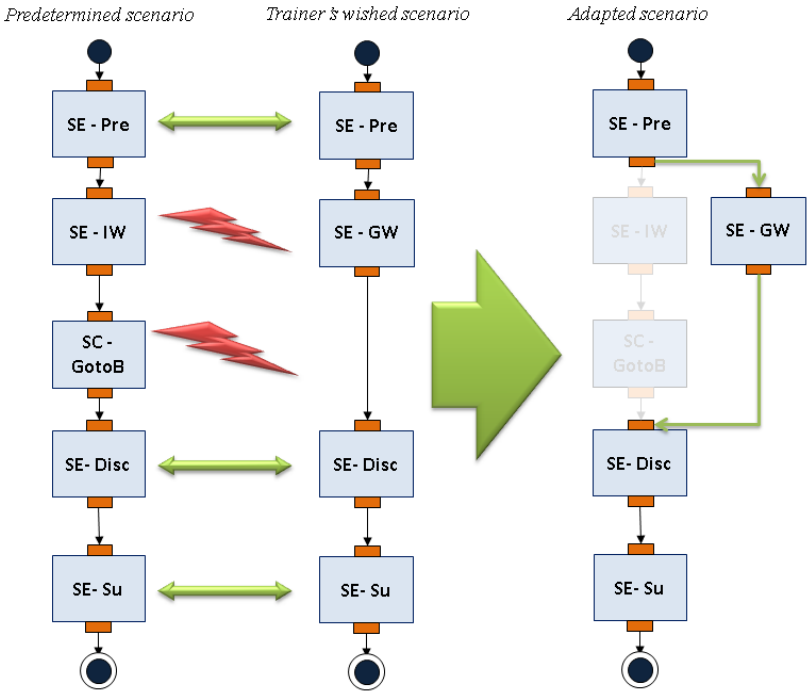


- Create ODL scenarios based on these situations



Case Study

- See how situation-based scenario can enhance the execution of training sessions
- Developp prototypes to test with real learners



Questions ?

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Modeling of Interactive Storytelling by Means of Linear Logic

Student: Kim Dung DANG

Advisors: Ronan CHAMPAGNAT

Michel AUGERAUD

Introduction (1)

- **I**nteractive **S**torytelling (IS): Opposition between a discourse point of view and a character one

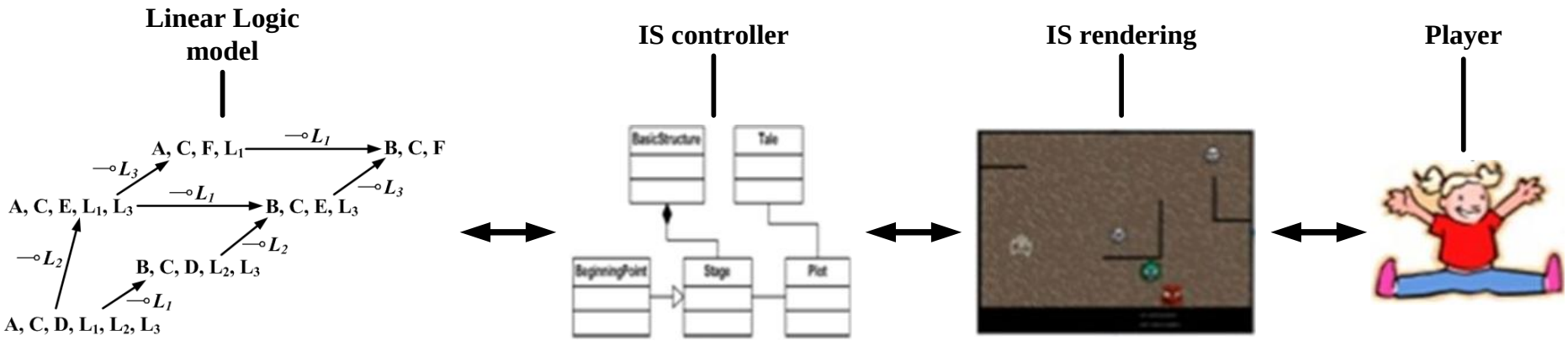
- Two major families
  - Scenario driven approach (discourse point of view)
    - Story development is coherent and leads to authors' desired effects
    - Player cannot direct the story unfolding in a considerable way
  - Emergent narrative theory (character point of view)
    - Give a complete freedom to the player
    - Cannot guarantee the desired goal of the story

Introduction (2)

- Use Linear Logic to model an IS → combine the strong points of the approaches mentioned above

- Develop a system that allows creating interactive video games assuring a set of objectives:
  - the player does not feel constrained by the game;
  - the virtual world must provide a coherent environment;
  - the progress of the game has to respect a structure of discourse.

Architecture of the system

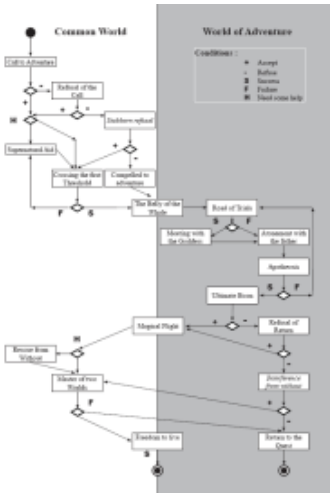


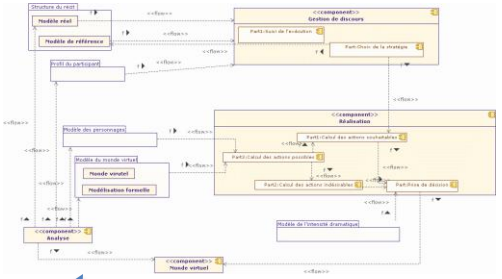
- **IS rendering**
  - build in advance all the necessary interfaces (scenes)
  - direct the “rendering process” of the game
- **IS controller**
  - manage the unfolding of the game
  - ask the IS rendering to show suitable interfaces (scenes)
- **Linear Logic model**
  - store a sequent modeling the situation of the game

Game modeling and creation process

Domain expert

Scenario in Linear Logic





IS controller

Author system

IS rendering

Technologist

Player

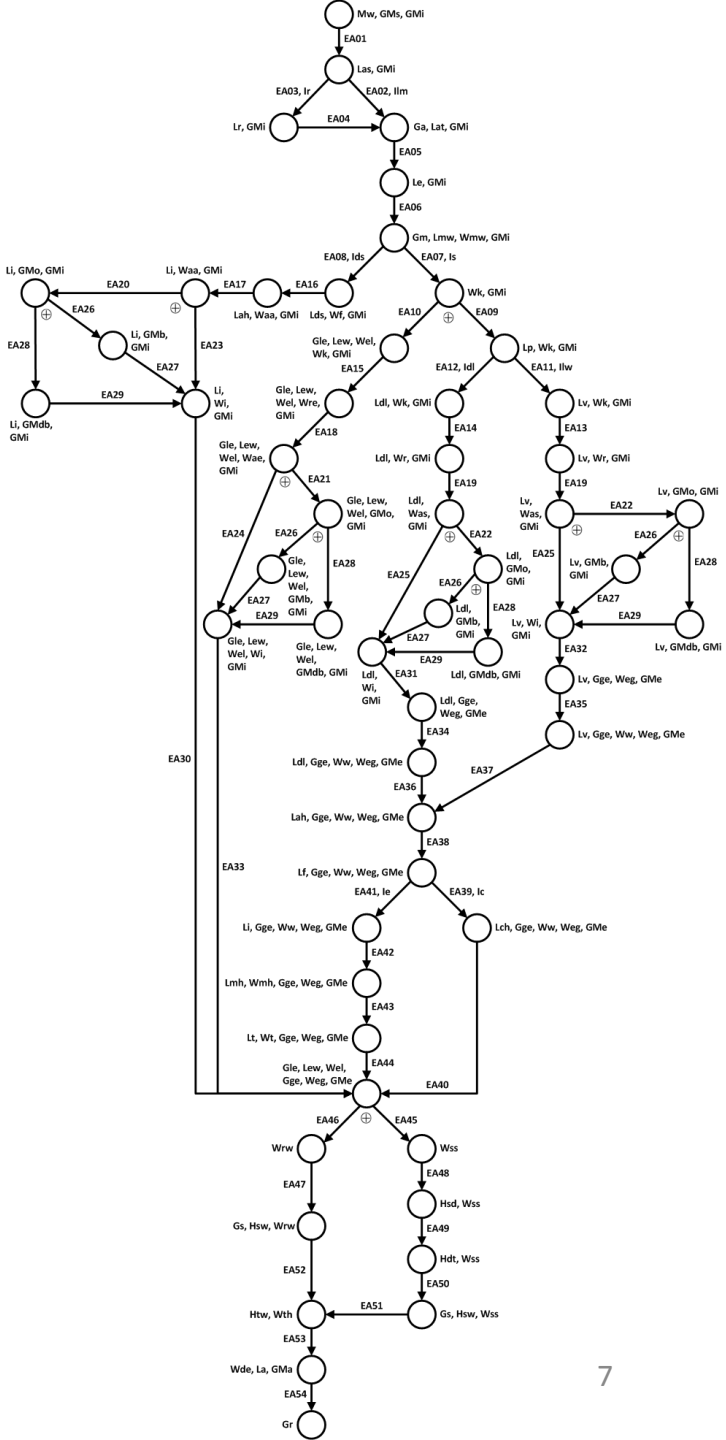
Example: Little Red Cap Video Game

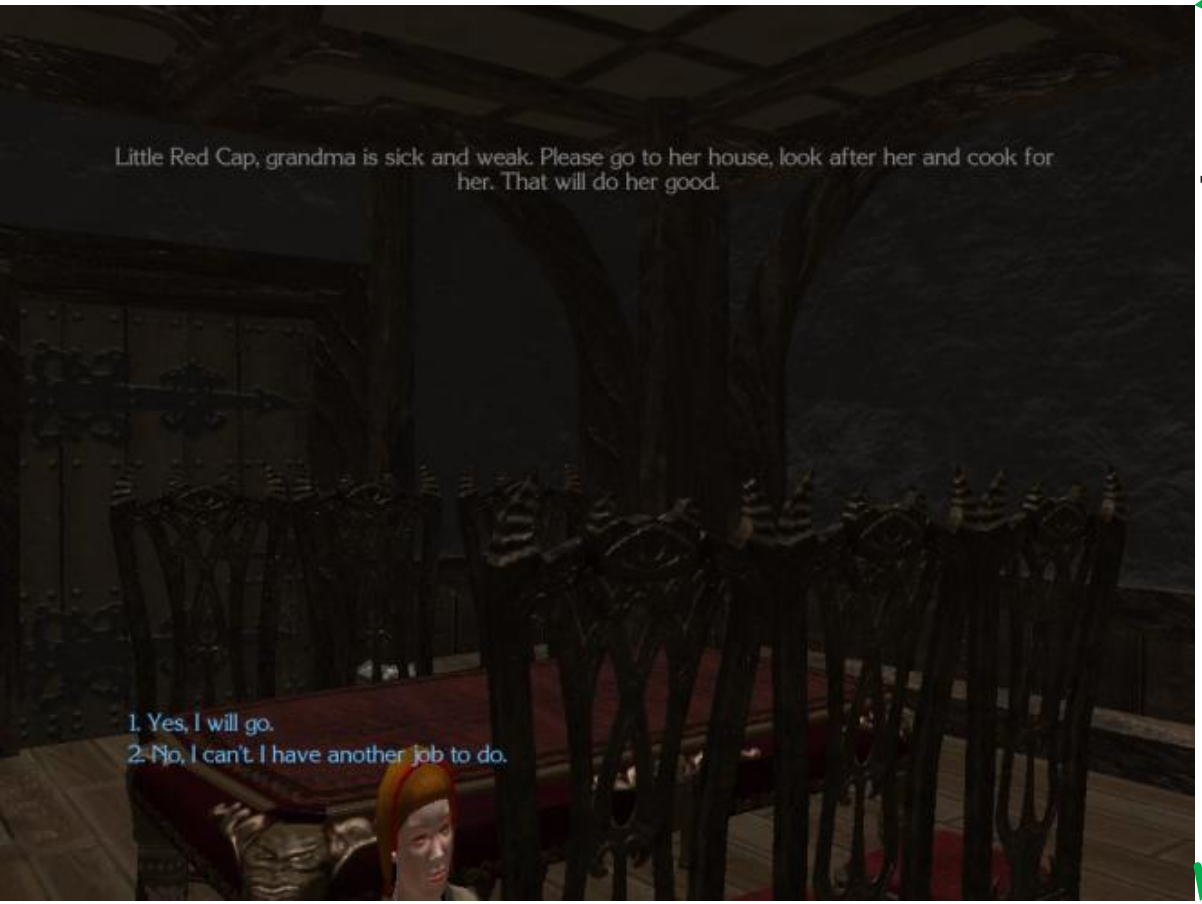
- Player: Little Red Cap (LRC)
- Non-player characters: Mother, wolf, grandmother and huntsman
- Some choices have been added

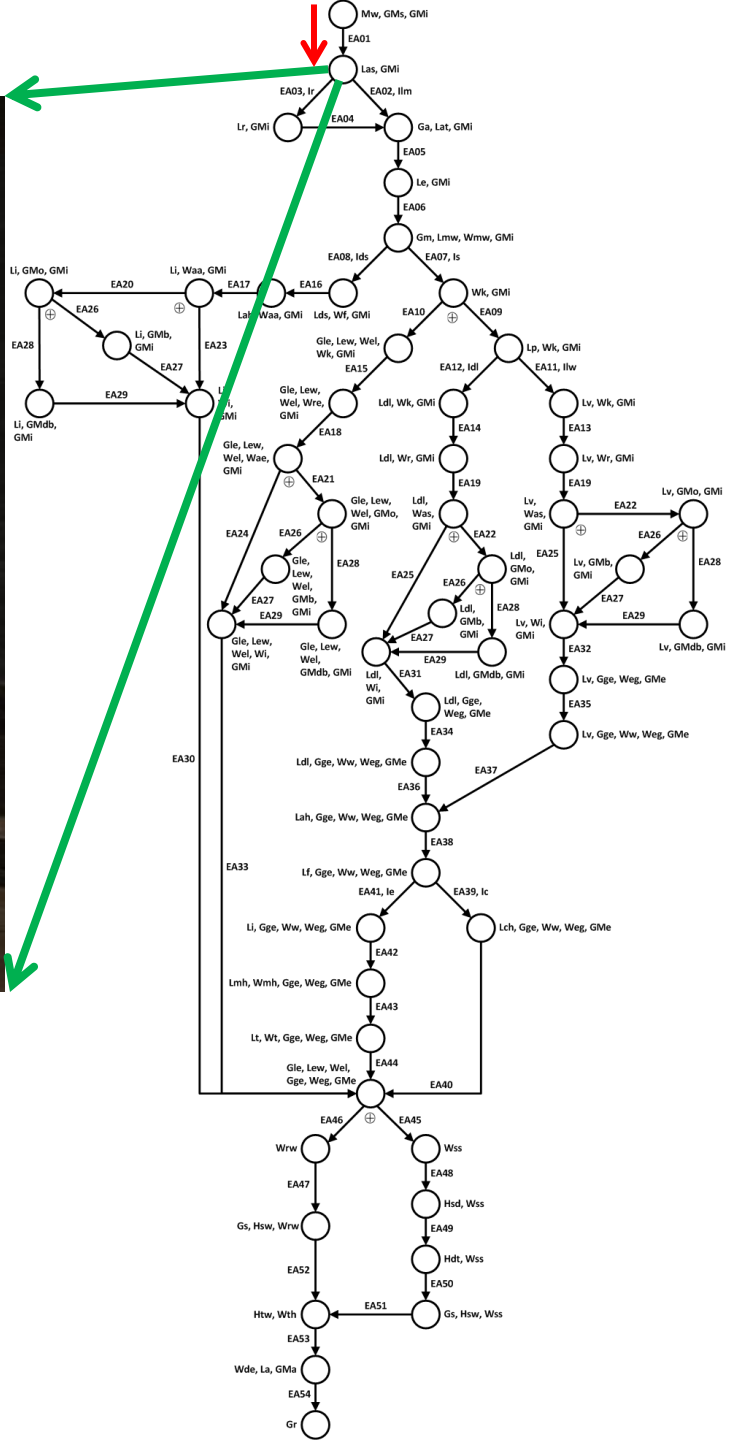
  →augment the unpredictability as well as the interactivity of the game

- Used technologies
  - "Neverwinter Nights 2" software: create the graphical interfaces (scenes) of the game
  - Java : build the IS controller
  - XML: represent the Linear Logic model

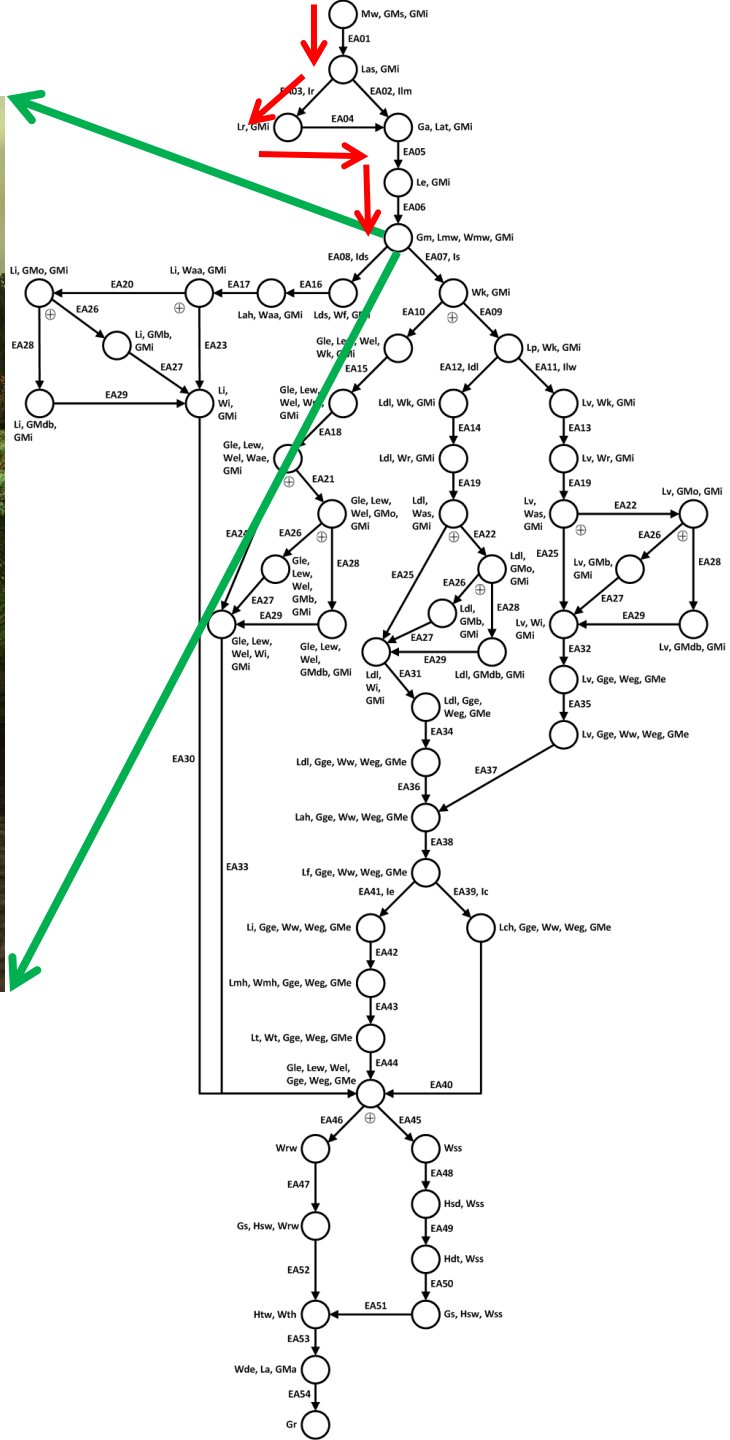
Interactive scenario of the game: 72 possible discourses



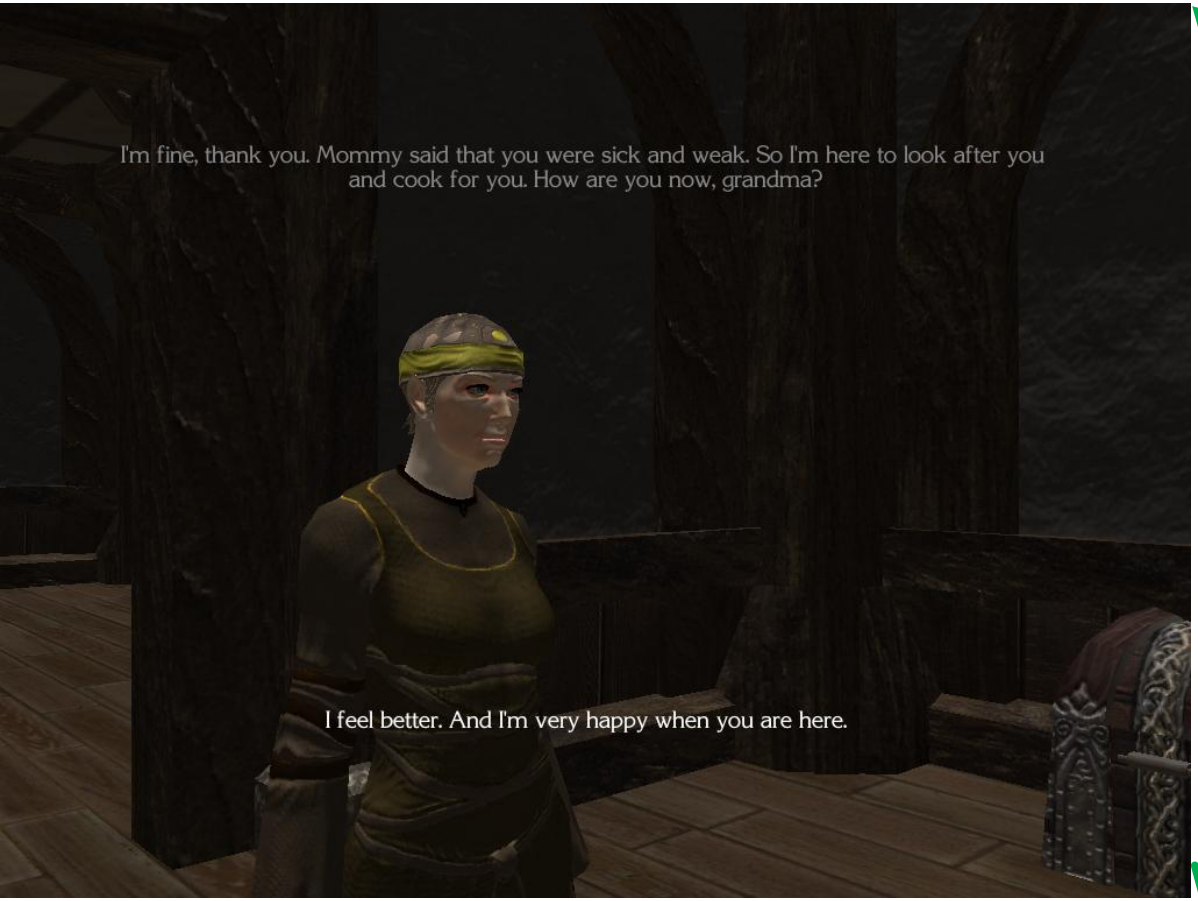


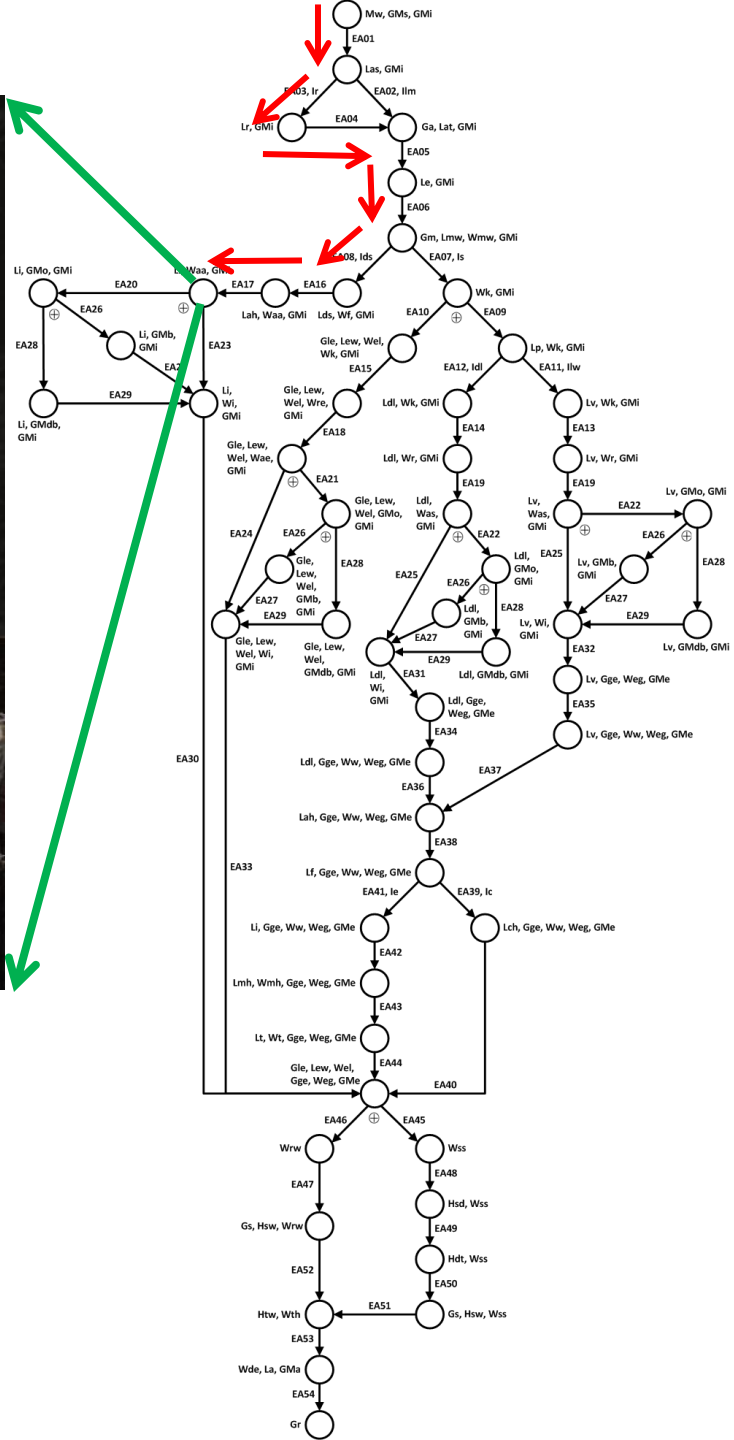


The mother asks LRC to go to the grandmother's house because she is sick and weak

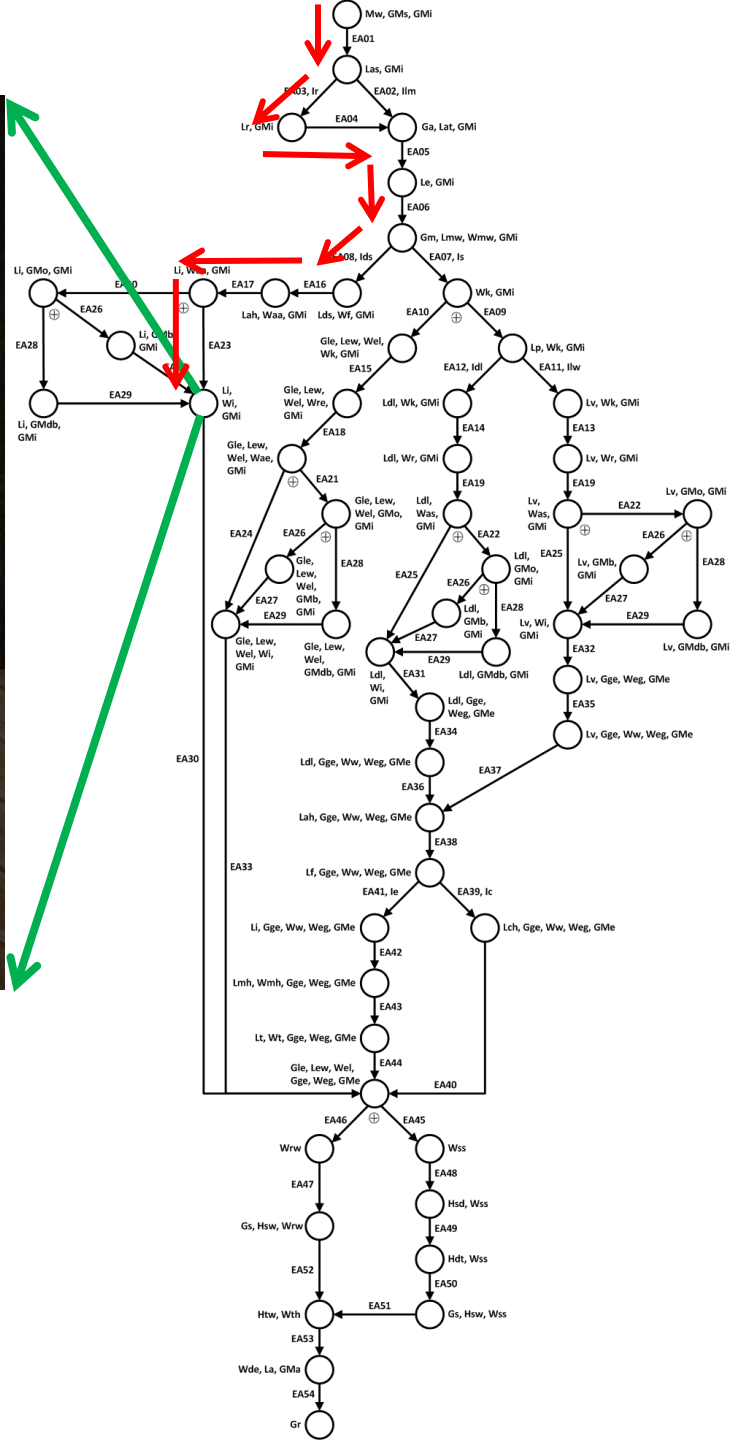


LRC says (or does not say) to the wolf where the grandmother's house is

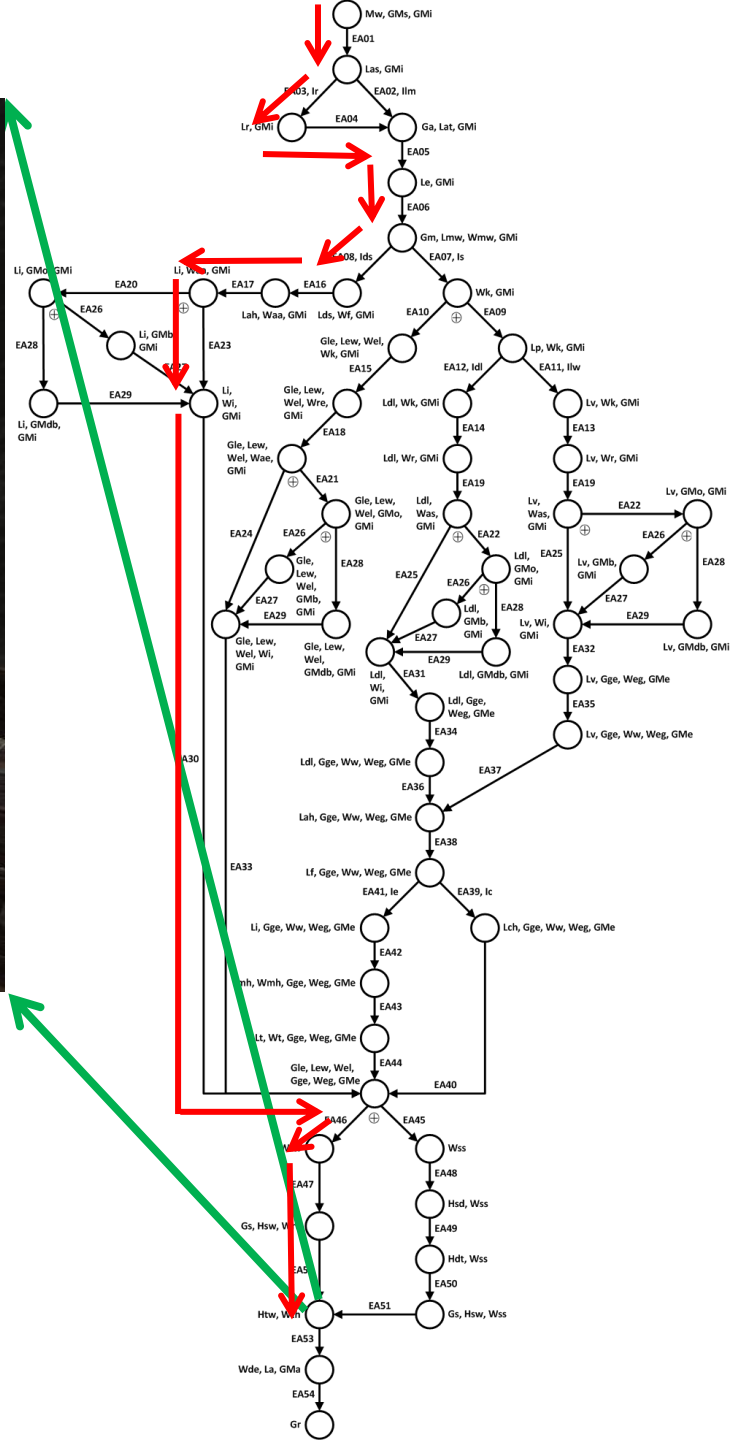




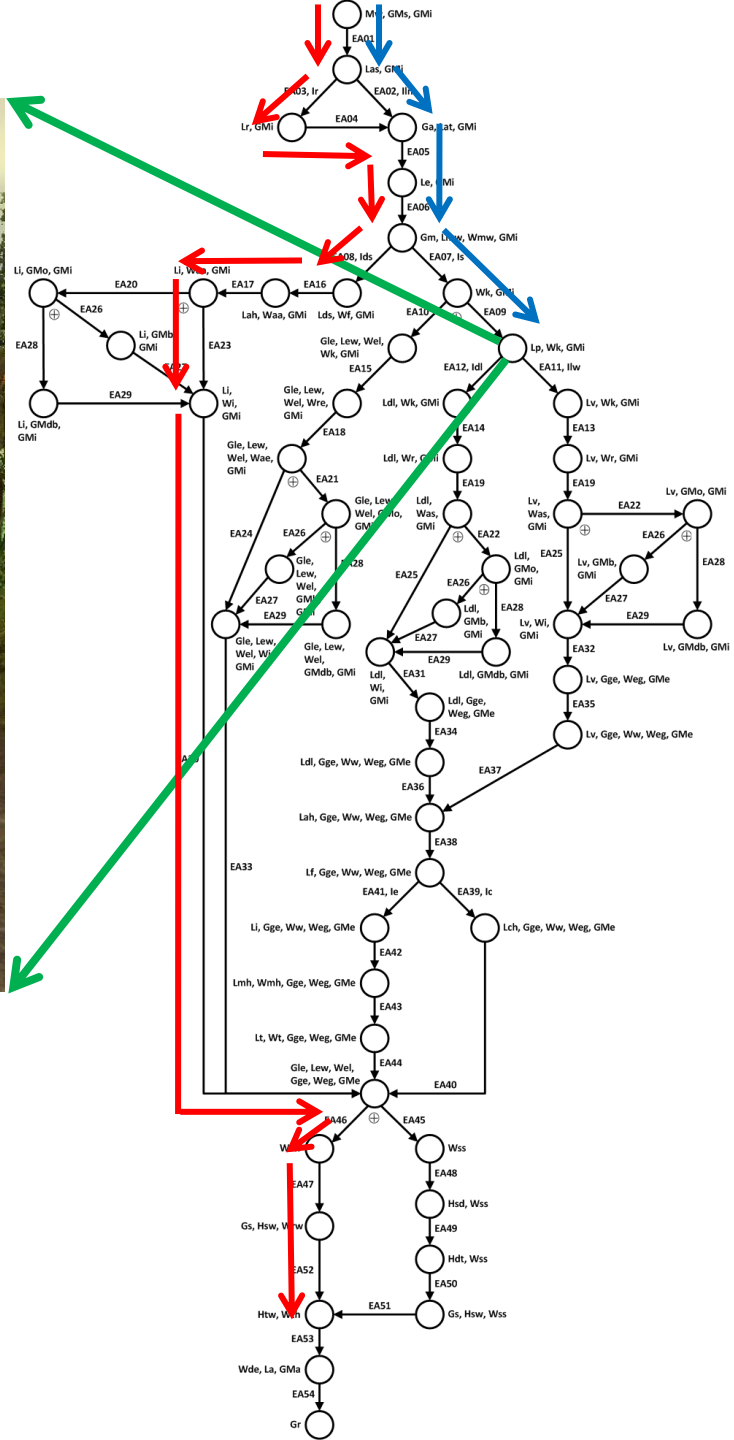
LRC enters the grandmother's house (she has not said to the wolf its position)



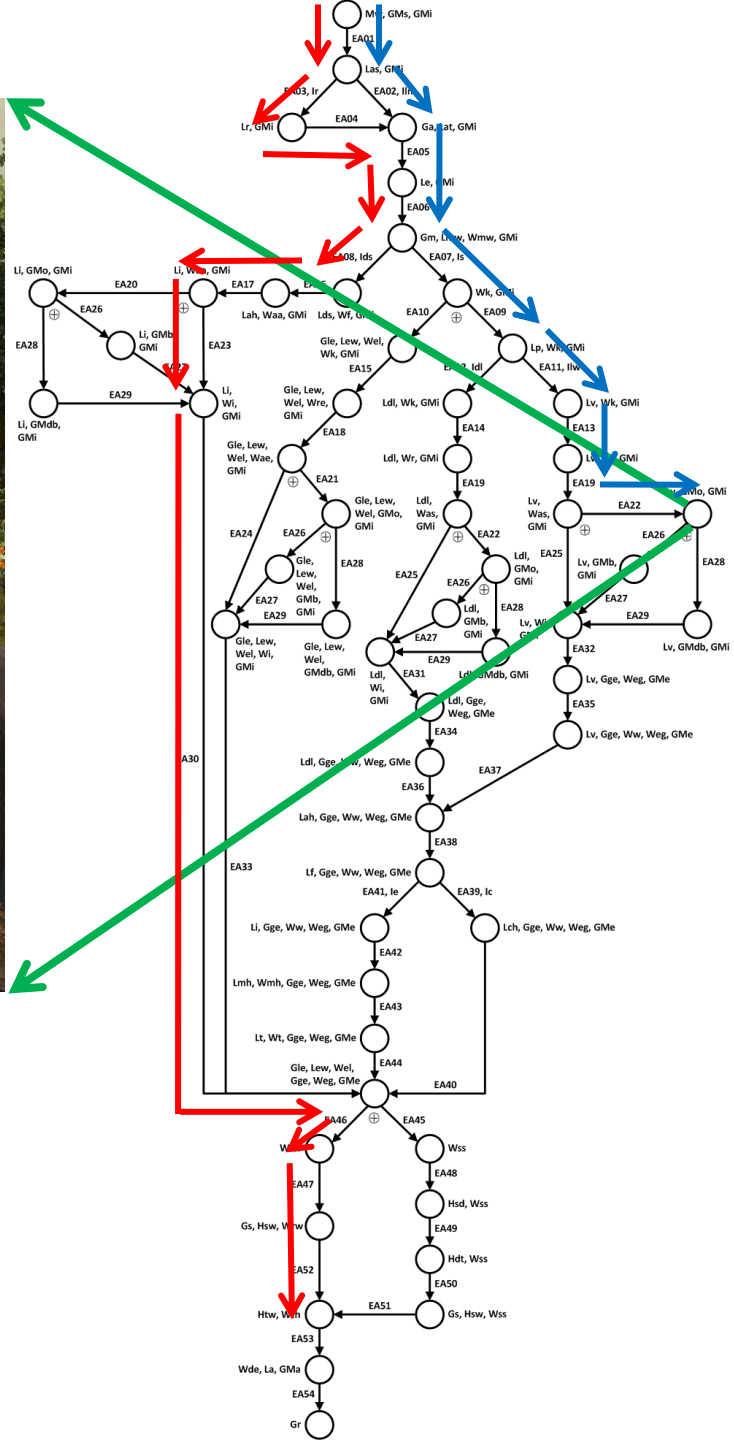
The wolf eats the grandmother and LRC



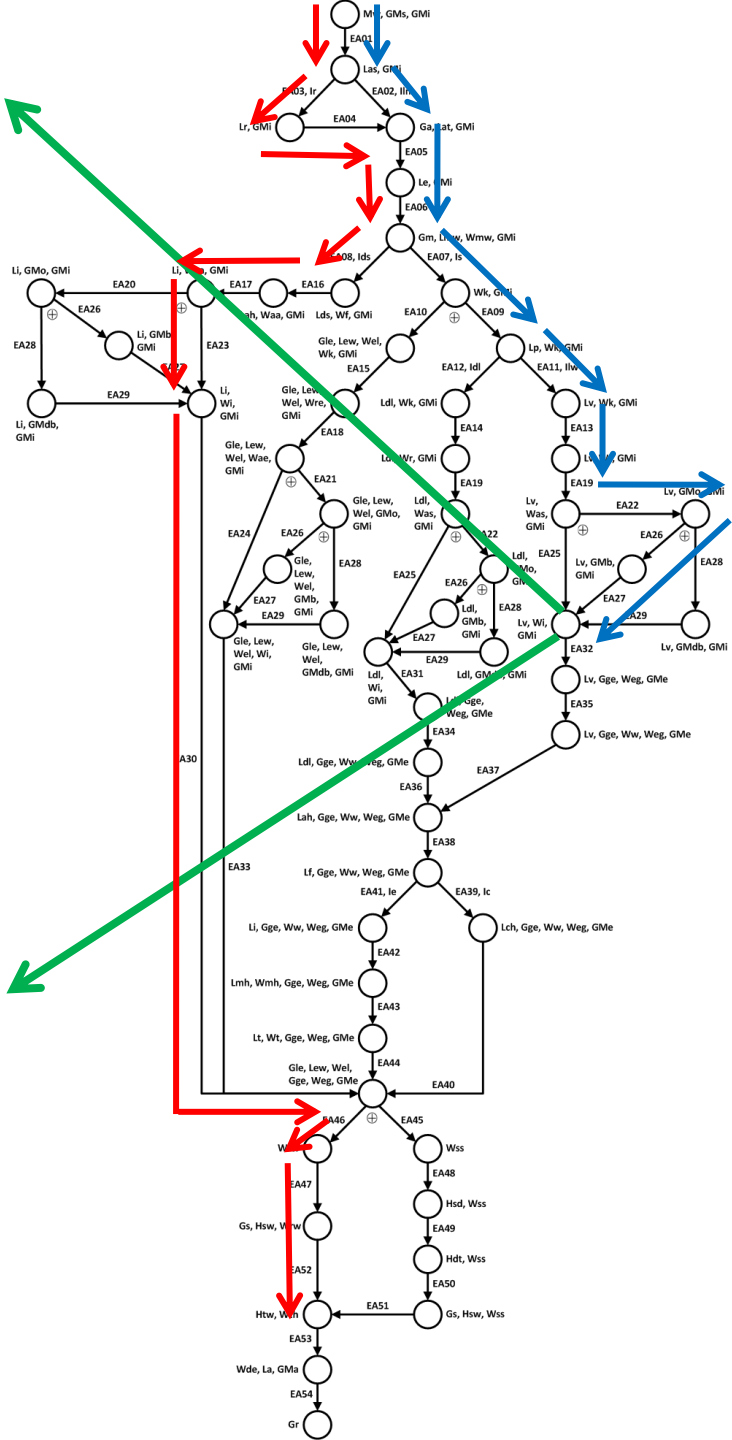
The huntsman kills the wolf to save the grandmother and LRC



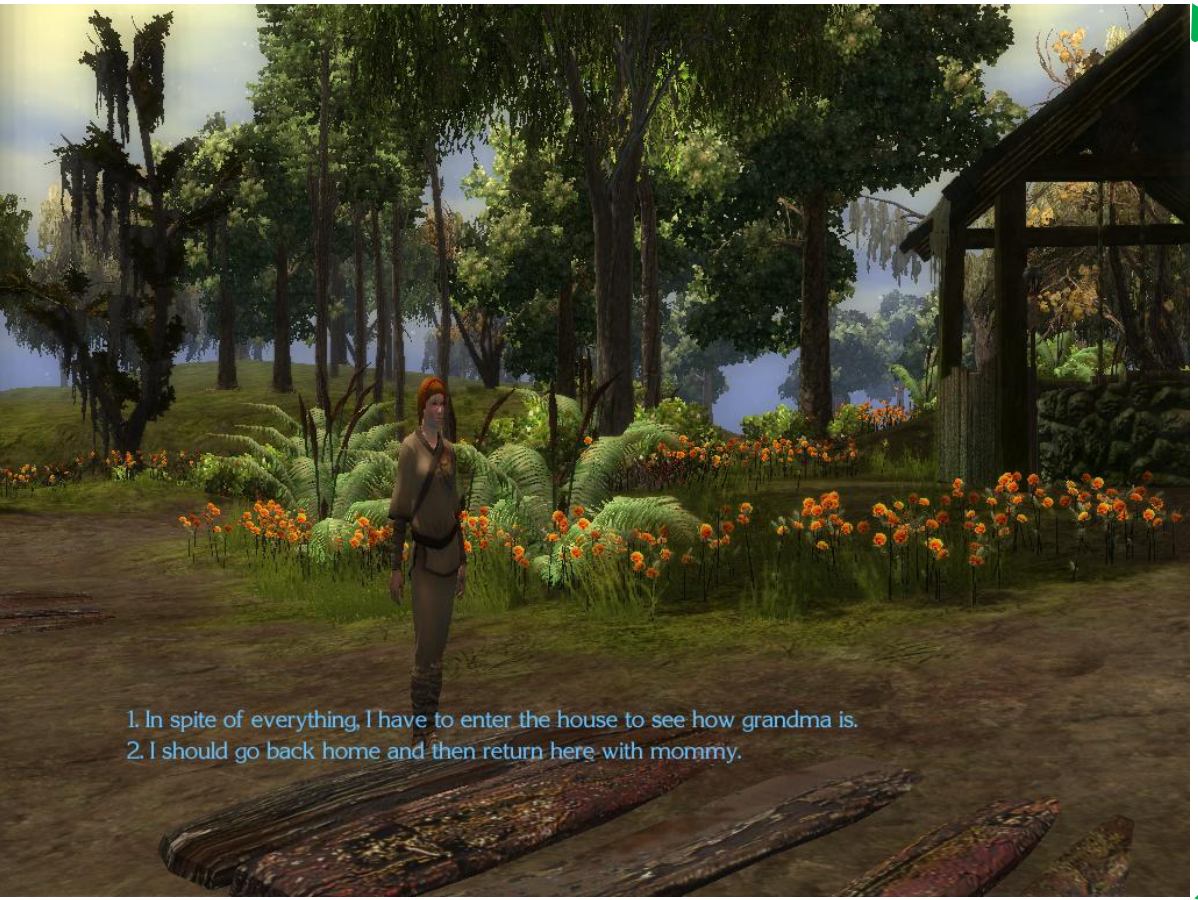
The wolf proposes LRC to enjoy a view in the woods

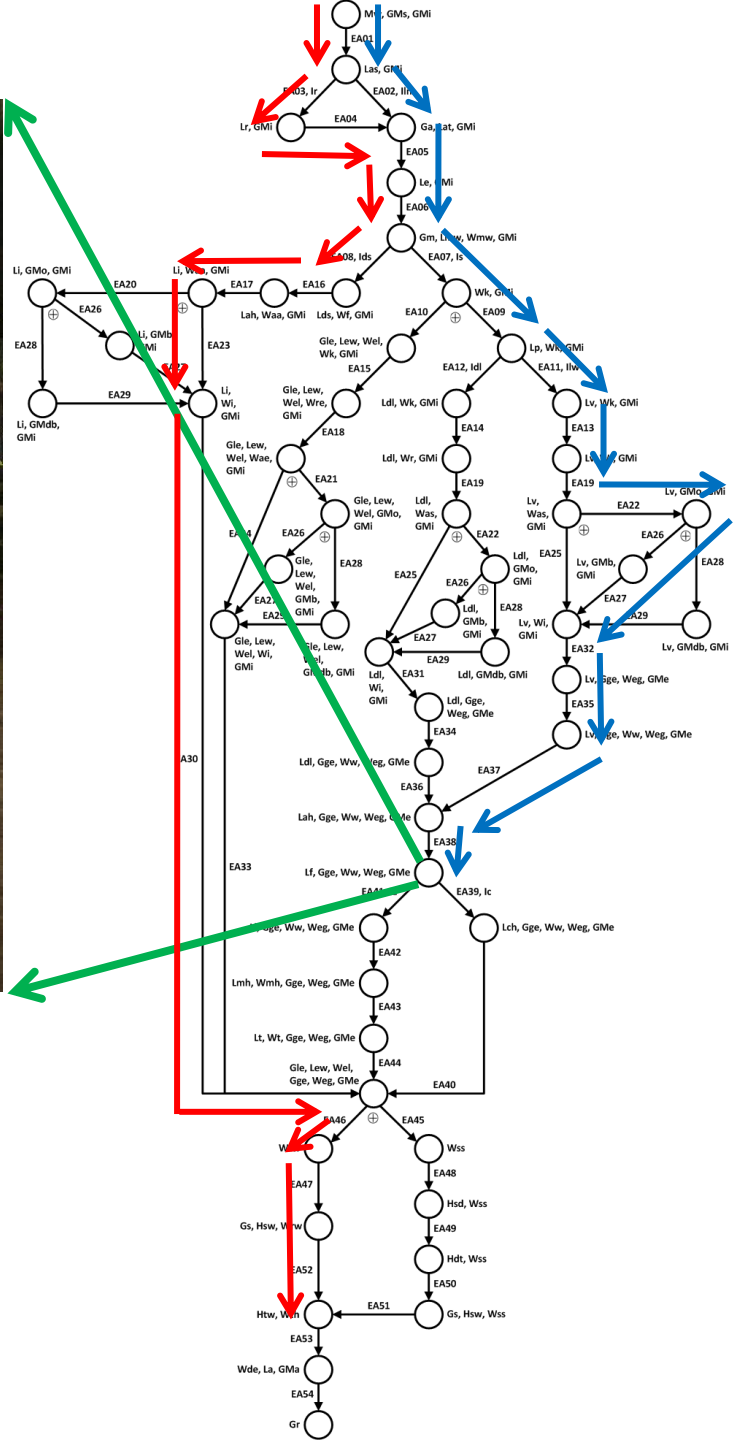


The wolf asks the grandmother to open the door by saying that he is LRC

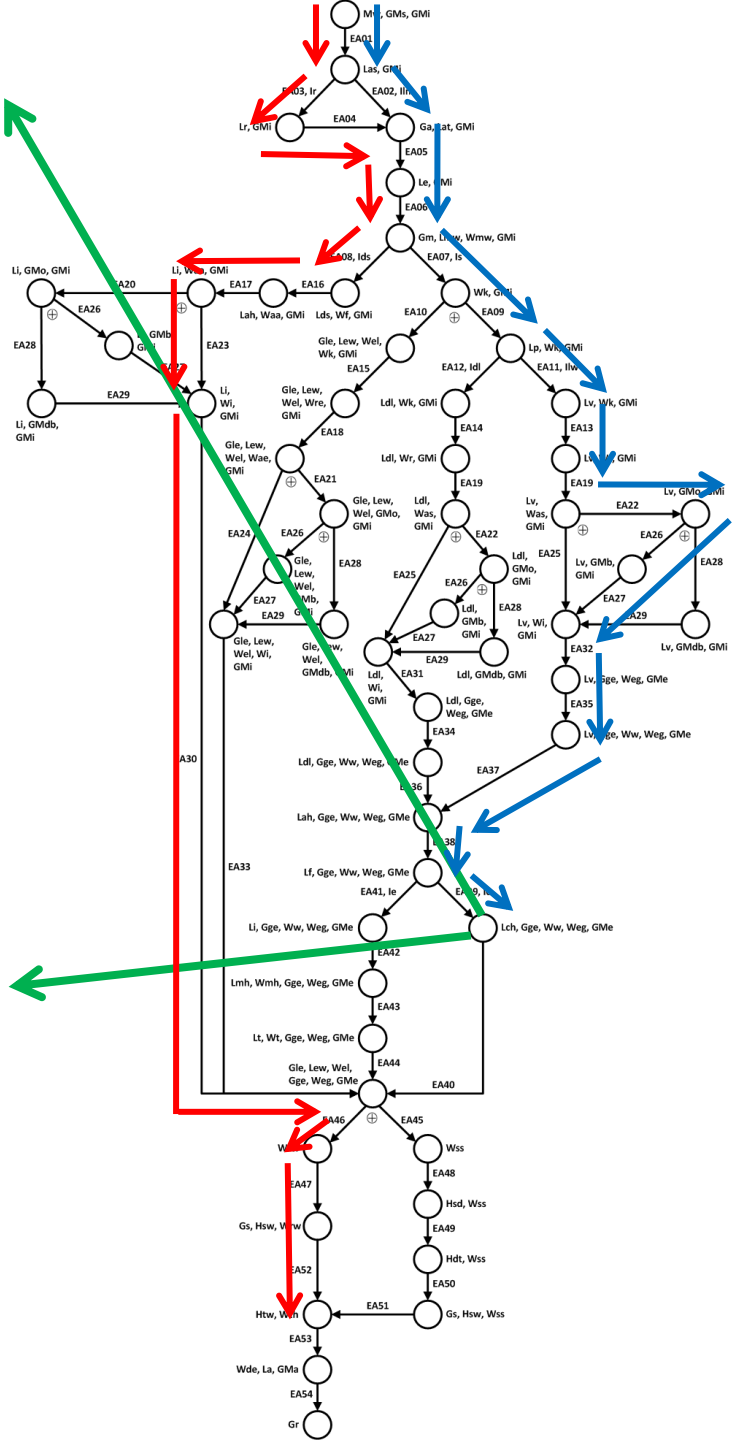


The wolf eats the grandmother and waits for LRC to eat her

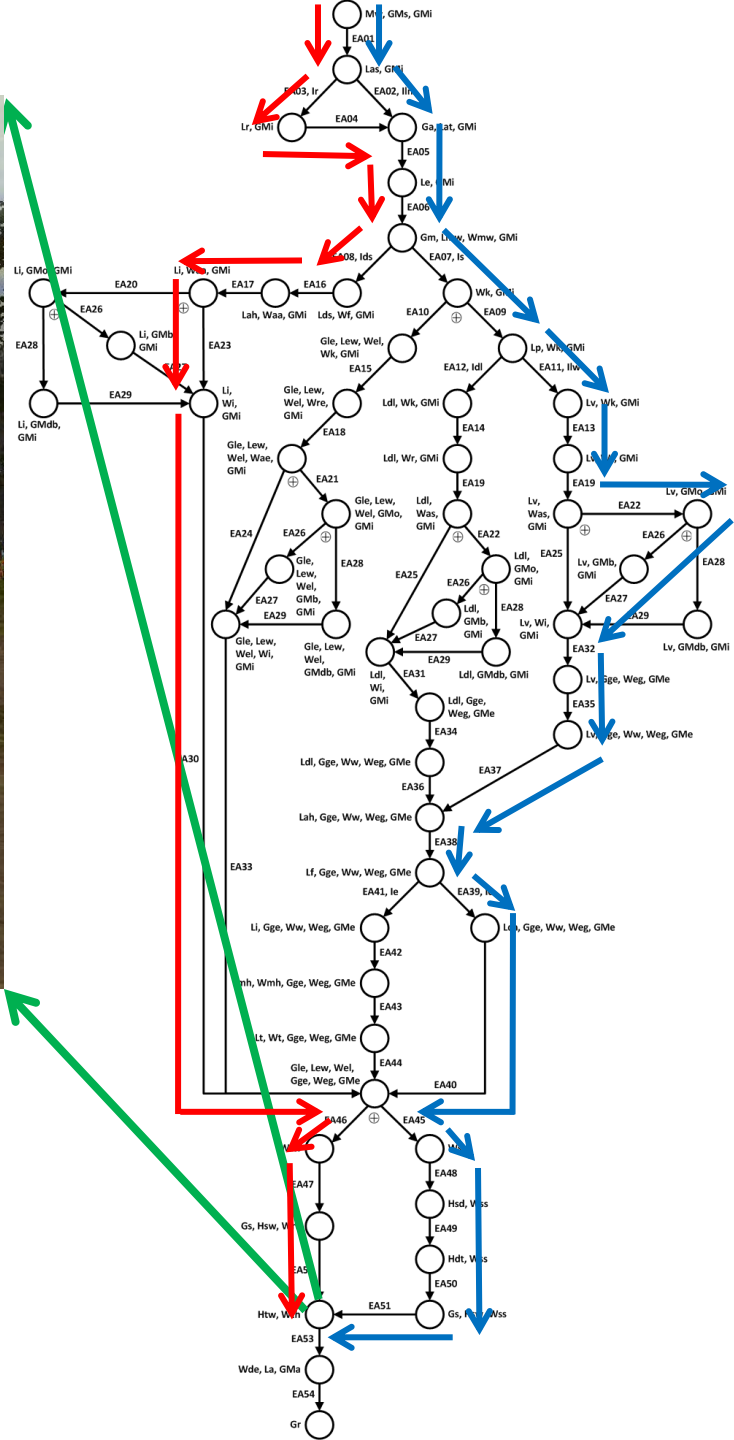




LRC enters (or does not enter) the grandmother's house although (because) she is afraid



The wolf runs after LRC to eat her because he detects that she is going back home



The huntsman kills the wolf to save the grandmother and LRC

Questions