

Introducing EDEN

From a conceptual perspective

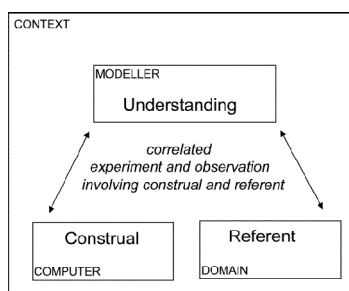
Key idea behind EM

Concerned with the process of sense-making through incremental construction

This doesn't have to involve using a computer, but the computer has liberated construction

Key problem: meaning has to be attached to the current state of the construction

Attaching meaning to the current state



Three key concerns

How can something we construct ...

- Represent state currently being experienced in a referent?
- Represent the direct transitions of state – those that can be experienced as meaningful in the referent?
- Enable the connection between construction and referent itself to be experienced?

In addressing these key concerns

What concepts can we use?

(People have always built construals – even before there were computers)

And what support can a computer model give to addressing each concern?

(The answer here will be more specific to computers – could ask same question for other technologies cf. analogue computers)

Three key concerns wrt DOSTE

How can something we construct ...

- Represent state currently being experienced in a referent?
Combinatorial state graph for evaluating expressions that define values of observables together with extant processes that update observables
- Represent the direct transitions of state – those that can be experienced as meaningful in the referent? *Can change the evaluation and updating mechanisms on-the-fly, by = and 'is'*
- Enable the connection between construction and referent itself to be experienced? *High degree of realism, analogue observables, expressiveness, indirection in reference ...*

Three key concerns wrt EDEN

How can something we construct ...

- Represent state currently being experienced in a referent?
Set of observables and dependencies expressed in the form of a 'definitive script'
- Represent the direct transitions of state – those that can be experienced as meaningful in the referent? Make redefinitions that change the current values and dependencies between observables on-the-fly, by = and 'is'
- Enable the connection between construction and referent itself to be experienced? Establishes a correspondence between patterns of observable, dependency and agency in construal and referent, as can be experienced through experimental interaction.

Horizontal and Vertical views of "now"

DOSTE

As of now, these are the interrelationships that are established and processes that are extant

EDEN

In this moment, these are amongst the possible direct interactions and agency that are afforded to me (or to other / hypothetical agents)

Note about EDEN

Clearly EDEN is not adapted to expressing processes and program-like behaviours in the first instance

It is unfortunate that EDEN has been abused so "successfully" to describe processes and programs – it's not primarily intended for use in this way

Comparing DOSTE and EDEN semantics

DOSTE	=	Changes the configuration of the state graph as of now
	Is	Defines how the state graph is reconfigured from one instant to the next
Eden / Eddi	=	Assigns the value of an expression to an observable
Eden / Eddi	Is	Defines the value of an observable so that it is now and thereafter the current value of an expression
Scout / Donald	=	

More about EDEN syntax

- Scout and Donald act as pre-processors to Eden but have their own symbol tables
- Scout and Donald definitions translate to 'is' definitions in Eden
- Scout observable names translate unchanged from Scout to Eden
- Donald observable names, which in general refer to nesting within **openshapes**, translate into observable names including '_' symbols. For instance: **room/width** maps to **_room_width**
- Attributes of the Donald observable **X** are defined by the observable **A_X** in Eden

Sources for illustration of EDEN

- Handout for Lecture 5 in CS405 2008/9 "Practical exercises illustrating definitive representation of state"
- Labs 1, 2 and 3 from CS405 2008/9