The Metacosm glossary

Metacosm Development Team

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2. Metacosm

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Glossary

Action

Actions are the basic piece in the Interaction model. They define at the smallest level how Entities interact with their surroundings. They encapsulate what the Entity does and how it does it. Entity influence their environment via Actions.

Action Controller

An action controller translates commands from a player or from an AI into actions of the controlled entity.

See Also: Artificial Intelligence, Controller, Entity.

Artificial Intelligence

In a broad sense, all that allows to provide an illusion of intelligence.

Attribute

Attributes define the inherent qualities of an entity. They describe Entities using Properties thus providing an objective description of an Entity. Attributes are basic descriptive elements of Entities. This description is not targeted at Players but at the simulation engine.

Attribute (for a Predicate)

An inherent characteristic. (Merriam-Webster's Collegiate Dictionary)

In Metacosm: An attribute is a characteristic associated to a *Predicate* against which the particular aspect of the *Predicable* tested by this Predicate, is evaluated.

Bot

Entity which is controlled by a non player (AI, script). Generally, a bot stands for a creature rather than for an entity of another kind.

See Also: Creature, Entity, Artificial Intelligence.

Capability

Capabilities are derived Attributes. Capabilities are Properties that are calculated instead of being fixed and then modified. They are based on combinations of Attributes. They reflect an Entity's natural ability to perform certain types of actions, regardless of skills.

Characteristic

Characteristics describe an Entity from an objective point of view. They gather parameters that can be manipulated via a set of rules. Characteristics represent the core of the information manipulated by the framework when a world is simulated in Metacosm. Characteristic is a generic term for Description, Identity, Attributes, Capabilities and Skills.

Charisma

Charisma represents how an Entity appears to others. the charisma of an Entity is not merely based on its appearance but reflects the capacity that an Entity has to attract positive reactions. For a living creature, charisma represents all that makes the Entity appealing: its beauty, its charm, its animal magic. The same applies also for inert Entities for which charisma can be considered as the way they can appeal to other Entities even when they aren't good looking. The charisma attribute of an Item can be thought as its potential artistic value and as something that will influence its commercial value. Characters will feel more comfortable with Entities with high charisma whereas they could feel that something is wrong with an Entity that has a low charisma. Spells can influence the charisma of Item (curse, "beautifiers"...).

From Merriam-Webster dictionary: A special magnetic charm or appeal.

Community

Community is an abstract concept introduced to talk about a group of Entities. The word "community" is to be interpreted in a very general, abstract way since it doesn’t imply anything else on member Entities than commonality between them.

Controller

A controller is an object (in an object oriented meaning) associated to an entity; it is entrusted by the entity to realize complex behaviours. By analogy, the controller would be the brains of a creature whereas the entity would be its corpse. However, an entity can possess several controllers and change controllers.

A controller is a player, an AI, a script...

See Also: Creature*,* Entity*,* Artificial Intelligence.

Coordination

Coordination represents an Entity’s capacity to act efficiently and harmoniously. For a living creature, coordination represents its agility, its suppleness. It represents just how efficiently it is able to move or perform complex moves. For an inert Entity, coordination represents how well it is built or how well its part fits together. Obviously, a one-part Item will have a null coordination. Only Entities with a specific coordination level would be able to react appropriately to orders given by Controllers. Coordination will be used when Item are animated by spells and affect what the Item can do once animated.

From Merriam-Webster dictionary: Harmonious functioning of parts for effective results.

Creature

- A creature is an entity.
- creature possesses members which it uses in order to move and to act upon other entities.
- A creature possesses skills which can evolve.
- A creature is born, lives and dies.

- A creature has needs: to feed, to sleep, to assuage its impulses.
- A creature is able to breed. Characteristics of a species evolve.
- A creature possesses unique identity and description which allow to distinguish it

See Also: Entity.

Endurance

Endurance represents an Entity's resistance to outside forces. The greater the endurance, the better an Entity will resist to anything that can affect its physical state. For a living creature, changes in physical state involve injuries, fatigue or illness. For an inert Entity, its endurance represents its solidity (an Item with a high endurance will be harder to break), its resistance to external elements (rain, acid, fire...).

From Merriam-Webster dictionary: Ability to withstand hardship or adversity; especially: the ability to sustain a prolonged stressful effort or activity.

Entities

Entities = Places + Creatures + Items

See Also: PlaceCreatureItem.

Entity

An Entity is an element of the framework that can be manipulated or interacted with during a game session.

Essence

Essence represents an Entity's life energy or inherent magical energy. Essence is what separates inert Entities from living creatures. Inert entities have a null essence attribute whereas it is positive for living creatures. When a living creature loses essence to the point of having a null essence attribute, it becomes an inert Entity with different effects depending on what caused the loss of essence. It can mean death, reification (transformation into an Item as an example due to over-cybernetization), destruction of the Entity, transformation into a living-dead, etc. Essence is the most important attribute for living creatures since processes such as aging, diseases, poisoning, etc. can be modelled via the variation of this attribute. The life cycle can can also be simulated via this attribute by ensuring that constantly decreases, thus forcing living creatures to eat to regenerate their essence by getting a sufficient amount of essence back from the food they eat.

From Merriam-Webster dictionary: The individual, real, or ultimate nature of a thing especially as opposed to its existence

Influence

An Influence defines a Community of similar Entities and how being part this Community "influences" Entities that belongs to it. An Influence gathers Characteristics and other game constructs that are common to the Community of Entities it defines, thus modifying Entities it influences. We use the term "influenced" when referring to game constructs that are modified ("influenced") by Influences and "influenceable" for game constructs that can be "influenced".

Intelligence

Intelligence represents an Entity’s ability to take into account its surroundings and react to it in a sensible way, capacity to solve problems. The intelligence concept is pretty obvious for living creatures. It is a little bit more complex for inert Entities. Obviously, common Items will have a null intelligence. However, technology or magic can make Items more able to handle their surrounding effectively given them a kind of intelligence.

From Merriam-Webster dictionary: Ability to learn or understand or to deal with new or trying situations.

Interaction

Interactions are the modality through which Entities modify (or at least try to...) their surrounding (including themselves). Everything that has an observable result in the game domain, is the result of an Interaction between one (an Entity interacting with itself) or several Entities.

Karma

> What constitutes the essence of a being.

> Fundamental principle of Hindu religions which is based on conception of human life as a link in a chain of lives (samsara), each life determined by the acts accomplished in the previous life.

Points awarded to a player in order to reward her for her role-play. If a player does not respect by her acts the objectives that she fixed in her life, she does not earn Karma and she can even lose some. A player can use Karma points to resuscitate, to reincarnate into a new creature...

See Also: Creature.

LowLevelDescription

Table containing all the necessary info to build a description of an Entity (description properties with intensity, for each Medium)

Magic

Magic represents an Entity's "understanding" of magical energies and capacity to control them. Magic is similar for both inert Entities and living creatures. This attribute represents just how good a medium an Entity is for magical energies. It represents the magical intensity that an Entity can put in spells or in resisting magic. An Entity with a null Magic attribute is consider as magically inactive. See the (yet to come) Magic-RFC for more information.

From Merriam-Webster dictionary: The use of means (as charms or spells) believed to have supernatural power over natural forces. (Note that this definition is slightly different from the one given here only as a reference.)

Medium

a means of effecting or conveying something (Merriam-Webster's Collegiate Dictionary)

channel for the transmission of some Stimuli: only Stimuli corresponding to the medium can be transmitted by this medium.

Model Controller

A Model controller maintains the controlled Entity state and updates the attributes of the Entity when needed.

See Also: entity, Controller.

Operator

In Metacosm: An object able to manipulate *Predicates*. In particular, an object able to combine several Predicates into one.

PerceptionState

The PerceptionState is a cache containing state Stimuli emitted by an Entity (one Stimulus per Medium). Each Entity should have a PerceptionState.

Power

Power represents an Entity's power to physically interact with other Entities. Basically, power represents what is physically acting in the essence of an Entity. It is against what endurance of an Entity has to resist when two Entities are in opposing physical interaction. For a living creature, power represents its physical power, its strength, just how strong it is. For an inert Entity, power represent how potent it is in modifying other Entities physical structure.

From Merriam-Webster dictionary: Ability to act or produce an effect.

Predicable

Something that may be predicated. (Merriam-Webster's Collegiate Dictionary)

In Metacosm: An object on which *Predicates* can operate.

Predicate

Something that is affirmed or denied of the subject in a proposition in logic. (Merriam-Webster's Collegiate Dictionary)

In Metacosm: An object evaluating a predicate on a set of Entities before to determine if manipulation on them are allowed. If an Entity manipulation (Action) is guarded by a Predicate, it can only be executed if and only if the guarding Predicate is validated (i.e., it is evaluated as true). A Predicate defines conditions to be verified on a set of Entities. Predicates are implemented as Command (design pattern) objects. As such, they can be serialized and reused in lots of different contexts without needed to be described again.

Sense

- a medium
- a sensibility (power)
- a dazzle control
- a memory of the last received Stimuli

Stimuli

Stimuli = Action Stimuli + Description Stimuli

StimuliDispatcher

A StimuliDispatcher is an intermediary between Entities emitting Stimuli and Entities receiving them. There is a StimuliDispatcher associated to each Place.

- a set of source Entities.
- a set of receiving Senses per different Medium.

Stimulus

- a source Entity
- an intrinsic intensity
- a Medium
- an action if need be
- some attributes to describe the source or the action

Type

A Type is a special kind of Influence. It is an Influence in the sense that it gathers Characteristics and modify Entities. It differs from simple Influences by its focus. While simple Influences modify already created Entities, the purpose of Type is to create new Entities.

Will

Will represents an Entity's self-control and power of sticking to its goal. For a living creature, will represents its strength of mind, the way it resists to adverse circumstances, seduction or mental manipulation. It is, once again, more complex for inert Entities. We can consider that an Item will is its inertia, its resistance to resist manipulation. It seems close to endurance but an Item's will is more oriented toward tricks (spells or playing with a mechanism for appropriate Items). Endurance deals more with resistance to destruction.

From Merriam-Webster dictionary: The power of control over one's own actions or emotions.