

# Cretaceous Gardens Controller

## *Software Requirements Specification*

*SRS Version 1.0*

Team #3

29 October 2019

**CS 460 Software Engineering**

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# 1 Introduction

The purpose of this document is to *specify* the requirements for the development of the Cretaceous Gardens Controller (CGC). The specification is formalized and diagrammed in order to guide the eventual implementation of the system. Information encountered in the corresponding *Requirements Definition Document* is reiterated and restated here where relevant.

After this introduction<sup>1</sup>, Section 2 gives an overview of the system. Section 3 delves into more detail with subsections 3.2 and 3.1 that feature a more granular view of the *Control Logic* and the *External Interfaces*. Section 6 provides the definition of technical terms that will be commonly used.

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<sup>1</sup>Introduction by Ezequiel Ramos

## 2 General Description

*This section <sup>2</sup> provides a general overview of the whole system. How the system interacts with the hardware interfaces and its basic functionality are introduced here. A description of parts to be used in the system and the available functionalities for each type are also provided. Some high level constraints and assumptions for the system will be also be presented. It should be noted that a more detailed specification of constraints is covered in its own section.*

### 2.1 Product Perspective

### 2.2 Product Functions

### 2.3 User Features

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<sup>2</sup>General Description by Ezequiel Ramos and Santiago Cejas

## 2.4 High Level Constraints

## 2.5 Assumptions

We assume that the infrastructure is all redundant. The CGC is installed on redundant servers. The network backbone has physical redundant links to appropriate devices like the cameras, the PA speakers, and the electric fence. We will also program redundancy into the logic. Like the ability to have another car available in case of an emergency or if the car breaks down.

Another assumption is that messages would be encrypted in order to provide the security needed, so the messages can not be intercepted and modified.

# 3 Specific Requirements

### *Section Introduction*

## 3.1 Interfaces

The Interfaces <sup>3</sup> make up all the pieces that the CGC communicates with. The CGC itself must communicate with everything, but a lot of interfaces can function on their own. The car interface is an example of one that needs to be able to function on it's own.

### Pay Kiosk

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<sup>3</sup>External Interfaces by Anas Gauba

### Incoming Events

1. Register visitor(demographics)/request money.
2. Accept money(type)/build token.

### Outgoing Events

1. Activate token(id).
2. Dispense token(id).
3. Dispense change(money, receipt).
4. Log transaction.
5. Report health status to CGC.

## Token

### Incoming Events

1. Trigger Alarm.
2. Return to car(carID).

### Outgoing Events

1. Report location to GPS Server(gpsID).

## Car

### Incoming Events

1. Read token(tokenID)/Unlock doors or deny access.
2. Activate car()[Normal Mode]/Go to south end to pick up visitors.
3. Activate car()[Emergency Mode]/Go to north end to pick up visitors.
4. Arrived(Destination)[Normal Mode]/pick up or drop off visitors following the conditioned the protocol.

5. Arrived(Destination)[Emergency Mode]/pick up or drop off visitors following the conditioned the protocol.
6. Weight detected.
7. Change driving mode(modeName).
8. Activate intercom.

### **Outgoing Events**

1. The GPS current location(id).
2. Alert visitors(carID).
3. Trigger alarm.
4. Report health status to CGC.

## **T-Rex Monitor**

### **Incoming Events**

1. Inject tranquilizer.

### **Outgoing Events**

1. Report T-Rex health.
2. Report health status to CGC.
3. Report location to GPS Server(gpsID).

## **Camera Network**

### **Incoming Events**

1. Delete recording(cameraID, date range).
2. Activate recording(cameraID).
3. Monitor streaming(cameraID).

### **Outgoing Events**

1. Camera outage(cameraID).
2. Report health status to CGC.

## **Electric Fence**

### **Incoming Events**

1. Null.

### **Outgoing Events**

1. Electricity distortion/trigger an emergency mode.
2. Report health status to CGC.

## **Global Alarm System**

### **Incoming Events**

1. Trigger alarms[Emergency Mode]/play emergency alarm sound.
2. Trigger alarms[Normal Mode]/play Public Service Annoucement (PSA).
3. Disable alarms.

### **Outgoing Events**

1. Report health status to CGC.

## **CGC Station**

### **Incoming Events**

1. Review health status of all the associated devices.



### Outgoing Events

1. Activate tranquilizer.
2. Deactivate emergency mode.
3. Activate intercom.

## GPS Server

### Incoming Events

1. Track location(gpsID).

### Outgoing Events

1. Report location(gpsID).

## 3.2 Control Logic

4

# 4 Design Constraints

### *Section Intro*

## 4.1 Client

- 

## 4.2 Safety

- 

## 4.3 Regulations

- 

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<sup>4</sup>Control Logic by Siri Khalsa

## 4.4 Security

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## 5 Sample Use Cases

*intro saying categorized by actor with diagrams blah blah blah these uses are just samples*

### 5.1 Bookkeeper

*brief description of actor*

---

**Use Case:** \*DoSomething (the name of the action to be executed by actor)\*

**Primary Actor:** \*ThatWhichWishesToDoSomething (name of actor)\*

**Goal in Context:** \*that which is to be accomplished by the action\*

**Preconditions:** \*states of the actor and system prior to the action\*

**Trigger:** \*that which initiates the action (e.g. actor breaks out of enclosure)\*

**Scenario:** \*sequence of actions from trigger to goal\*

1. first event
2. second event
3. ...

**Exceptions:** \*edge cases, potential hazards, errors, etc\*

some exception

some other exception

...

**Priority:** \*level of implementation importance (e.g. correct change is a must)\*

**When Available:** \*when or during which interval of time the action is to supported by the system\*

**Frequency of Use:** \*number of uses per unit of time (e.g. annually, billions per second, etc)\*

**Channel to Primary Actor:** \*means through which the system interacts with actor\*

**Channels to Secondary Actors:** \*means through which the primary and secondary actors interact\*

some channel

some other channel

...

**Secondary Actors:** \*intermediary or auxillary actors required to complete the goal\*

**Open Issues:** \*itemization of current problems with any of the above\*

some issue

some other issue

...

## 5.2 CGC Station Operator

*brief description of actor*

---

**Use Case:** \*DoSomething (the name of the action to be executed by actor)\*

**Primary Actor:** \*ThatWhichWishesToDoSomething (name of actor)\*

**Goal in Context:** \*that which is to be accomplished by the action\*

**Preconditions:** \*states of the actor and system prior to the action\*

**Trigger:** \*that which initiates the action (e.g. actor breaks out of enclosure)\*

**Scenario:** \*sequence of actions from trigger to goal\*

1. first event
2. second event
3. ...

**Exceptions:** \*edge cases, potential hazards, errors, etc\*

some exception  
some other exception  
...

**Priority:** \*level of implementation importance (e.g. correct change is a must)\*

**When Available:** \*when or during which interval of time the action is to supported by the system\*

**Frequency of Use:** \*number of uses per unit of time (e.g. annually, billions per second, etc)\*

**Channel to Primary Actor:** \*means through which the system interacts with actor\*

**Channels to Secondary Actors:** \*means through which the primary and secondary actors interact\*

some channel  
some other channel  
...

**Secondary Actors:** \*intermediary or auxillary actors required to complete the goal\*

**Open Issues:** \*itemization of current problems with any of the above\*

some issue  
some other issue  
...

## 5.3 Emergency Personnel

*brief description of actor*

---

**Use Case:** \*DoSomething (the name of the action to be executed by actor)\*

**Primary Actor:** \*ThatWhichWishesToDoSomething (name of actor)\*

**Goal in Context:** \*that which is to be accomplished by the action\*

**Preconditions:** \*states of the actor and system prior to the action\*

**Trigger:** \*that which initiates the action (e.g. actor breaks out of enclosure)\*

**Scenario:** \*sequence of actions from trigger to goal\*

1. first event
2. second event
3. ...

**Exceptions:** \*edge cases, potential hazards, errors, etc\*

some exception  
some other exception  
...

**Priority:** \*level of implementation importance (e.g. correct change is a must)\*

**When Available:** \*when or during which interval of time the action is to be supported by the system\*

**Frequency of Use:** \*number of uses per unit of time (e.g. annually, billions per second, etc)\*

**Channel to Primary Actor:** \*means through which the system interacts with actor\*

**Channels to Secondary Actors:** \*means through which the primary and secondary actors interact\*

some channel

some other channel

...

**Secondary Actors:** \*intermediary or auxillary actors required to complete the goal\*

**Open Issues:** \*itemization of current problems with any of the above\*

some issue

some other issue

...

## 5.4 Enclosure Maintenance Personnel

*brief description of actor*

---

**Use Case:** \*DoSomething (the name of the action to be executed by actor)\*

**Primary Actor:** \*ThatWhichWishesToDoSomething (name of actor)\*

**Goal in Context:** \*that which is to be accomplished by the action\*

**Preconditions:** \*states of the actor and system prior to the action\*

**Trigger:** \*that which initiates the action (e.g. actor breaks out of enclosure)\*

**Scenario:** \*sequence of actions from trigger to goal\*

1. first event
2. second event
3. ...

**Exceptions:** \*edge cases, potential hazards, errors, etc\*

some exception  
some other exception  
...

**Priority:** \*level of implementation importance (e.g. correct change is a must)\*

**When Available:** \*when or during which interval of time the action is to supported by the system\*

**Frequency of Use:** \*number of uses per unit of time (e.g. annually, billions per second, etc)\*

**Channel to Primary Actor:** \*means through which the system interacts with actor\*

**Channels to Secondary Actors:** \*means through which the primary and secondary actors interact\*

some channel  
some other channel  
...

**Secondary Actors:** \*intermediary or auxillary actors required to complete the goal\*

**Open Issues:** \*itemization of current problems with any of the above\*

some issue  
some other issue  
...

## 5.5 Guest

*brief description of actor*

---

**Use Case:** \*DoSomething (the name of the action to be executed by actor)\*

**Primary Actor:** \*ThatWhichWishesToDoSomething (name of actor)\*

**Goal in Context:** \*that which is to be accomplished by the action\*

**Preconditions:** \*states of the actor and system prior to the action\*

**Trigger:** \*that which initiates the action (e.g. actor breaks out of enclosure)\*

**Scenario:** \*sequence of actions from trigger to goal\*

1. first event
2. second event
3. ...

**Exceptions:** \*edge cases, potential hazards, errors, etc\*

some exception  
some other exception  
...

**Priority:** \*level of implementation importance (e.g. correct change is a must)\*

**When Available:** \*when or during which interval of time the action is to supported by the system\*

**Frequency of Use:** \*number of uses per unit of time (e.g. annually, billions per second, etc)\*

**Channel to Primary Actor:** \*means through which the system interacts with actor\*



**Channels to Secondary Actors:** \*means through which the primary and secondary actors interact\*

some channel

some other channel

...

**Secondary Actors:** \*intermediary or auxillary actors required to complete the goal\*

**Open Issues:** \*itemization of current problems with any of the above\*

some issue

some other issue

...

---

**Use Case:** \*DoSomething (the name of the action to be executed by actor)\*

**Primary Actor:** \*ThatWhichWishesToDoSomething (name of actor)\*

**Goal in Context:** \*that which is to be accomplished by the action\*

**Preconditions:** \*states of the actor and system prior to the action\*

**Trigger:** \*that which initiates the action (e.g. actor breaks out of enclosure)\*

**Scenario:** \*sequence of actions from trigger to goal\*

1. first event

2. second event

3. ...

**Exceptions:** \*edge cases, potential hazards, errors, etc\*

some exception

some other exception

...

**Priority:** \*level of implementation importance (e.g. correct change is a must)\*

**When Available:** \*when or during which interval of time the action is to be supported by the system\*

**Frequency of Use:** \*number of uses per unit of time (e.g. annually, billions per second, etc)\*

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**Channels to Secondary Actors:** \*means through which the primary and secondary actors interact\*

some channel

some other channel

...

**Secondary Actors:** \*intermediary or auxiliary actors required to complete the goal\*

**Open Issues:** \*itemization of current problems with any of the above\*

some issue

some other issue

...

---

**Use Case:** \*DoSomething (the name of the action to be executed by actor)\*

**Primary Actor:** \*ThatWhichWishesToDoSomething (name of actor)\*

**Goal in Context:** \*that which is to be accomplished by the action\*

**Preconditions:** \*states of the actor and system prior to the action\*

**Trigger:** \*that which initiates the action (e.g. actor breaks out of enclosure)\*

**Scenario:** \*sequence of actions from trigger to goal\*

1. first event
2. second event
3. ...

**Exceptions:** \*edge cases, potential hazards, errors, etc\*

some exception  
some other exception  
...

**Priority:** \*level of implementation importance (e.g. correct change is a must)\*

**When Available:** \*when or during which interval of time the action is to supported by the system\*

**Frequency of Use:** \*number of uses per unit of time (e.g. annually, billions per second, etc)\*

**Channel to Primary Actor:** \*means through which the system interacts with actor\*

**Channels to Secondary Actors:** \*means through which the primary and secondary actors interact\*

some channel  
some other channel  
...

**Secondary Actors:** \*intermediary or auxillary actors required to complete the goal\*

**Open Issues:** \*itemization of current problems with any of the above\*

some issue  
some other issue  
...

---

**Use Case:** \*DoSomething (the name of the action to be executed by actor)\*

**Primary Actor:** \*ThatWhichWishesToDoSomething (name of actor)\*

**Goal in Context:** \*that which is to be accomplished by the action\*

**Preconditions:** \*states of the actor and system prior to the action\*

**Trigger:** \*that which initiates the action (e.g. actor breaks out of enclosure)\*

**Scenario:** \*sequence of actions from trigger to goal\*

1. first event
2. second event
3. ...

**Exceptions:** \*edge cases, potential hazards, errors, etc\*

some exception  
some other exception  
...

**Priority:** \*level of implementation importance (e.g. correct change is a must)\*

**When Available:** \*when or during which interval of time the action is to be supported by the system\*

**Frequency of Use:** \*number of uses per unit of time (e.g. annually, billions per second, etc)\*

**Channel to Primary Actor:** \*means through which the system interacts with actor\*

**Channels to Secondary Actors:** \*means through which the primary and secondary actors interact\*

some channel

some other channel

...

**Secondary Actors:** \*intermediary or auxillary actors required to complete the goal\*

**Open Issues:** \*itemization of current problems with any of the above\*

some issue

some other issue

...

## 5.6 Guest Vehicle

*brief description of actor*

---

**Use Case:** \*DoSomething (the name of the action to be executed by actor)\*

**Primary Actor:** \*ThatWhichWishesToDoSomething (name of actor)\*

**Goal in Context:** \*that which is to be accomplished by the action\*

**Preconditions:** \*states of the actor and system prior to the action\*

**Trigger:** \*that which initiates the action (e.g. actor breaks out of enclosure)\*

**Scenario:** \*sequence of actions from trigger to goal\*

1. first event

2. second event

3. ...

**Exceptions:** \*edge cases, potential hazards, errors, etc\*

some exception

some other exception

...

**Priority:** \*level of implementation importance (e.g. correct change is a must)\*

**When Available:** \*when or during which interval of time the action is to supported by the system\*

**Frequency of Use:** \*number of uses per unit of time (e.g. annually, billions per second, etc)\*

**Channel to Primary Actor:** \*means through which the system interacts with actor\*

**Channels to Secondary Actors:** \*means through which the primary and secondary actors interact\*

some channel

some other channel

...

**Secondary Actors:** \*intermediary or auxillary actors required to complete the goal\*

**Open Issues:** \*itemization of current problems with any of the above\*

some issue

some other issue

...

**Use Case:** \*DoSomething (the name of the action to be executed by actor)\*

**Primary Actor:** \*ThatWhichWishesToDoSomething (name of actor)\*

**Goal in Context:** \*that which is to be accomplished by the action\*

**Preconditions:** \*states of the actor and system prior to the action\*

**Trigger:** \*that which initiates the action (e.g. actor breaks out of enclosure)\*

**Scenario:** \*sequence of actions from trigger to goal\*

1. first event
2. second event
3. ...

**Exceptions:** \*edge cases, potential hazards, errors, etc\*

some exception  
some other exception  
...

**Priority:** \*level of implementation importance (e.g. correct change is a must)\*

**When Available:** \*when or during which interval of time the action is to supported by the system\*

**Frequency of Use:** \*number of uses per unit of time (e.g. annually, billions per second, etc)\*

**Channel to Primary Actor:** \*means through which the system interacts with actor\*

**Channels to Secondary Actors:** \*means through which the primary and secondary actors interact\*

some channel

some other channel

...

**Secondary Actors:** \*intermediary or auxillary actors required to complete the goal\*

**Open Issues:** \*itemization of current problems with any of the above\*

some issue

some other issue

...

## 5.7 Network Maintenance Personnel

*brief description of actor*

---

**Use Case:** \*DoSomething (the name of the action to be executed by actor)\*

**Primary Actor:** \*ThatWhichWishesToDoSomething (name of actor)\*

**Goal in Context:** \*that which is to be accomplished by the action\*

**Preconditions:** \*states of the actor and system prior to the action\*

**Trigger:** \*that which initiates the action (e.g. actor breaks out of enclosure)\*

**Scenario:** \*sequence of actions from trigger to goal\*

1. first event
2. second event
3. ...

**Exceptions:** \*edge cases, potential hazards, errors, etc\*

some exception

some other exception



...

**Priority:** \*level of implementation importance (e.g. correct change is a must)\*

**When Available:** \*when or during which interval of time the action is to supported by the system\*

**Frequency of Use:** \*number of uses per unit of time (e.g. annually, billions per second, etc)\*

**Channel to Primary Actor:** \*means through which the system interacts with actor\*

**Channels to Secondary Actors:** \*means through which the primary and secondary actors interact\*

some channel

some other channel

...

**Secondary Actors:** \*intermediary or auxillary actors required to complete the goal\*

**Open Issues:** \*itemization of current problems with any of the above\*

some issue

some other issue

...

## 5.8 Patrol Vehicle

*brief description of actor*

---

**Use Case:** \*DoSomething (the name of the action to be executed by actor)\*

**Primary Actor:** \*ThatWhichWishesToDoSomething (name of actor)\*

**Goal in Context:** \*that which is to be accomplished by the action\*

**Preconditions:** \*states of the actor and system prior to the action\*

**Trigger:** \*that which initiates the action (e.g. actor breaks out of enclosure)\*

**Scenario:** \*sequence of actions from trigger to goal\*

1. first event
2. second event
3. ...

**Exceptions:** \*edge cases, potential hazards, errors, etc\*

some exception  
some other exception  
...

**Priority:** \*level of implementation importance (e.g. correct change is a must)\*

**When Available:** \*when or during which interval of time the action is to supported by the system\*

**Frequency of Use:** \*number of uses per unit of time (e.g. annually, billions per second, etc)\*

**Channel to Primary Actor:** \*means through which the system interacts with actor\*

**Channels to Secondary Actors:** \*means through which the primary and secondary actors interact\*

some channel  
some other channel  
...

**Secondary Actors:** \*intermediary or auxillary actors required to complete the goal\*

**Open Issues:** \*itemization of current problems with any of the above\*

some issue

some other issue

...

## 5.9 Sales department

*brief description of actor*

---

**Use Case:** \*DoSomething (the name of the action to be executed by actor)\*

**Primary Actor:** \*ThatWhichWishesToDoSomething (name of actor)\*

**Goal in Context:** \*that which is to be accomplished by the action\*

**Preconditions:** \*states of the actor and system prior to the action\*

**Trigger:** \*that which initiates the action (e.g. actor breaks out of enclosure)\*

**Scenario:** \*sequence of actions from trigger to goal\*

1. first event

2. second event

3. ...

**Exceptions:** \*edge cases, potential hazards, errors, etc\*

some exception

some other exception

...

**Priority:** \*level of implementation importance (e.g. correct change is a must)\*

**When Available:** \*when or during which interval of time the action is to supported by the system\*

**Frequency of Use:** \*number of uses per unit of time (e.g. annually, billions per second, etc)\*

**Channel to Primary Actor:** \*means through which the system interacts with actor\*

**Channels to Secondary Actors:** \*means through which the primary and secondary actors interact\*

some channel

some other channel

...

**Secondary Actors:** \*intermediary or auxillary actors required to complete the goal\*

**Open Issues:** \*itemization of current problems with any of the above\*

some issue

some other issue

...

## 5.10 System Administrator

*brief description of actor*

---

**Use Case:** \*DoSomething (the name of the action to be executed by actor)\*

**Primary Actor:** \*ThatWhichWishesToDoSomething (name of actor)\*

**Goal in Context:** \*that which is to be accomplished by the action\*

**Preconditions:** \*states of the actor and system prior to the action\*

**Trigger:** \*that which initiates the action (e.g. actor breaks out of enclosure)\*

**Scenario:** \*sequence of actions from trigger to goal\*

1. first event
2. second event
3. ...

**Exceptions:** \*edge cases, potential hazards, errors, etc\*

some exception  
some other exception  
...

**Priority:** \*level of implementation importance (e.g. correct change is a must)\*

**When Available:** \*when or during which interval of time the action is to supported by the system\*

**Frequency of Use:** \*number of uses per unit of time (e.g. annually, billions per second, etc)\*

**Channel to Primary Actor:** \*means through which the system interacts with actor\*

**Channels to Secondary Actors:** \*means through which the primary and secondary actors interact\*

some channel  
some other channel  
...

**Secondary Actors:** \*intermediary or auxillary actors required to complete the goal\*

**Open Issues:** \*itemization of current problems with any of the above\*

some issue  
some other issue  
...

## 5.11 System Auditor

*brief description of actor*

---

**Use Case:** \*DoSomething (the name of the action to be executed by actor)\*

**Primary Actor:** \*ThatWhichWishesToDoSomething (name of actor)\*

**Goal in Context:** \*that which is to be accomplished by the action\*

**Preconditions:** \*states of the actor and system prior to the action\*

**Trigger:** \*that which initiates the action (e.g. actor breaks out of enclosure)\*

**Scenario:** \*sequence of actions from trigger to goal\*

1. first event
2. second event
3. ...

**Exceptions:** \*edge cases, potential hazards, errors, etc\*

some exception  
some other exception  
...

**Priority:** \*level of implementation importance (e.g. correct change is a must)\*

**When Available:** \*when or during which interval of time the action is to supported by the system\*

**Frequency of Use:** \*number of uses per unit of time (e.g. annually, billions per second, etc)\*

**Channel to Primary Actor:** \*means through which the system interacts with actor\*

**Channels to Secondary Actors:** \*means through which the primary and secondary actors interact\*

some channel

some other channel

...

**Secondary Actors:** \*intermediary or auxillary actors required to complete the goal\*

**Open Issues:** \*itemization of current problems with any of the above\*

some issue

some other issue

...

## 5.12 System Technician

*brief description of actor*

---

**Use Case:** \*DoSomething (the name of the action to be executed by actor)\*

**Primary Actor:** \*ThatWhichWishesToDoSomething (name of actor)\*

**Goal in Context:** \*that which is to be accomplished by the action\*

**Preconditions:** \*states of the actor and system prior to the action\*

**Trigger:** \*that which initiates the action (e.g. actor breaks out of enclosure)\*

**Scenario:** \*sequence of actions from trigger to goal\*

1. first event
2. second event
3. ...

**Exceptions:** \*edge cases, potential hazards, errors, etc\*

some exception

some other exception

...

**Priority:** \*level of implementation importance (e.g. correct change is a must)\*

**When Available:** \*when or during which interval of time the action is to supported by the system\*

**Frequency of Use:** \*number of uses per unit of time (e.g. annually, billions per second, etc)\*

**Channel to Primary Actor:** \*means through which the system interacts with actor\*

**Channels to Secondary Actors:** \*means through which the primary and secondary actors interact\*

some channel

some other channel

...

**Secondary Actors:** \*intermediary or auxillary actors required to complete the goal\*

**Open Issues:** \*itemization of current problems with any of the above\*

some issue

some other issue

...

## 5.13 Tyrannosaurus Rex

*brief description of actor*

---

**Use Case:** LeaveEnclosure



**Primary Actor:** The main exhibit, the mighty T.Rex

**Goal in Context:** To get somewhere that happens to be outside the enclosure.

**Preconditions:** Actor is not sedated, the system is not in maintenance mode nor emergency mode, and the enclosure is operational.

**Trigger:** The T.Rex sees or smells something outside the enclosure.

**Scenario:**

1. The actor looks through the enclosure, toward an imagined near-future destination beyond the enclosure.
2. The actor walks toward the target destination.
3. The actor is impeded by the electric fence.
4. The actor becomes fearful.
  - (a) The actor retreats from the fence.OR
  - (b) The actor attacks the fence.
5. The electric fence increases its voltage.
6. The scenario may repeat from either act 1, from act 3, or continues such that:
  - (a) the enclosure is breached and the actor heads toward the target destination.OR
  - (b) the actor relinquishes the desire to head toward the target destination.

**Exceptions:** \*edge cases, potential hazards, errors, etc\*

Actor Perishes.

...

**Priority:** \*level of implementation importance (e.g. correct change is a must)\*

**When Available:** \*when or during which interval of time the action is to supported by the system\*

**Frequency of Use:** \*number of uses per unit of time (e.g. annually, billions per second, etc)\*

**Channel to Primary Actor:** \*means through which the system interacts with actor\*

**Channels to Secondary Actors:** \*means through which the primary and secondary actors interact\*

some channel

some other channel

...

**Secondary Actors:** \*intermediary or auxillary actors required to complete the goal\*

**Open Issues:** \*itemization of current problems with any of the above\*

some issue

some other issue

...

## 5.14 Veterinarian

*brief description of actor*

---

**Use Case:** \*DoSomething (the name of the action to be executed by actor)\*

**Primary Actor:** \*ThatWhichWishesToDoSomething (name of actor)\*

**Goal in Context:** \*that which is to be accomplished by the action\*

**Preconditions:** \*states of the actor and system prior to the action\*

**Trigger:** \*that which initiates the action (e.g. actor breaks out of enclosure)\*

**Scenario:** \*sequence of actions from trigger to goal\*

1. first event
2. second event
3. ...

**Exceptions:** \*edge cases, potential hazards, errors, etc\*

some exception  
some other exception  
...

**Priority:** \*level of implementation importance (e.g. correct change is a must)\*

**When Available:** \*when or during which interval of time the action is to supported by the system\*

**Frequency of Use:** \*number of uses per unit of time (e.g. annually, billions per second, etc)\*

**Channel to Primary Actor:** \*means through which the system interacts with actor\*

**Channels to Secondary Actors:** \*means through which the primary and secondary actors interact\*

some channel  
some other channel  
...

**Secondary Actors:** \*intermediary or auxillary actors required to complete the goal\*

**Open Issues:** \*itemization of current problems with any of the above\*

some issue  
some other issue  
...

## 5.15 Zookeeper

*brief description of actor*

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**Use Case:** \*DoSomething (the name of the action to be executed by actor)\*

**Primary Actor:** \*ThatWhichWishesToDoSomething (name of actor)\*

**Goal in Context:** \*that which is to be accomplished by the action\*

**Preconditions:** \*states of the actor and system prior to the action\*

**Trigger:** \*that which initiates the action (e.g. actor breaks out of enclosure)\*

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1. first event
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**Exceptions:** \*edge cases, potential hazards, errors, etc\*

some exception  
some other exception  
...

**Priority:** \*level of implementation importance (e.g. correct change is a must)\*

**When Available:** \*when or during which interval of time the action is to supported by the system\*

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**Channel to Primary Actor:** \*means through which the system interacts with actor\*

**Channels to Secondary Actors:** \*means through which the primary and secondary actors interact\*

some channel

some other channel

...

**Secondary Actors:** \*intermediary or auxillary actors required to complete the goal\*

**Open Issues:** \*itemization of current problems with any of the above\*

some issue

some other issue

...

## 6 Definition of Terms

*The following is a list of definitions<sup>5</sup> of the most commonly used technical terms within this document, whose meaning may not be immediately apparent to the lay reader. Most definitions come from no specific source; instead they are defined by the authors in the context of their use in this document and originate from the vocabulary shared across the general references cited . In the event that a definition was taken directly from a source, it is followed by a citation*

**CGC:** Acronym for Cretaceous Gardens Controller

**DVR:** Acronym for Digital Video Recorder

**Electrical Conduction:** The movement of electrically charged particles through a transmission medium.

**GPS:** Global Positioning System

**Hardwired Ethernet:** This references the latest IEEE standard for Ethernet utilizing physical cables.

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<sup>5</sup>Definition of Terms by Anas Gauba

**Network:** All nodes with which the CGC interacts, the links that connect them to each other and to the CGC, the CGC itself, and all related databases.

**Node:** The generic term that refers to any device connected to the CGC in any way. This includes autonomous vehicles, tokens, the T.Rex monitor, all electric fence panels, all kiosks, and all cameras.

**Safely Inactive:** A state in which a vehicle is fully functional and ready to be dispatched.

**Safely Occupied:** A state in which a vehicle contains at least one person, is locked, and is ready to depart.

**Token:** An interactive device used by the visitor that grants access to locations.