

STRATEGY

The main defined strategy is to achieve the maximum damage at the first shot. To accomplish this, three modules were defined:

- Improved Structures Detection Module
- Special Ability Module
- Attack Strategy Module

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IMPROVED STRUCTURES DETECTION MODULE

By using the tools given by the Competition Organizers to get the scenario's objects with their exact location and combining it with the 2014 winners framework, we define the connected block structures as buildings. The buildings classifications are based on their density, which is defined by the detection of the building bounds and their inner occupation. The classification is described below:



House of Cards
 has a density of 40%
 or less or it has less than four blocks.



Bunker
 has a density greater than 40%.



Tower
 is a bunker which is 30% higher than wider.

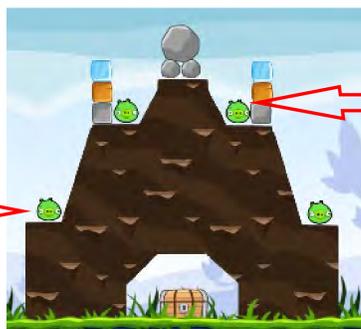
SPECIAL ABILITY MODULE

To achieve a successful attack a method that activates the ability at the desired moment was defined. The method arguments are: sling location, bird's release point location, target location and a percentage. The percentage indicates the distance that must be traveled of the total trajectory before the ability gets activated. Given the particular situations presented on each stage, this percentage is defined based on the available bird and the type of the targeted structure.

ATTACK STRATEGY MODULE

To define a good attack strategy it is necessary to detect the scenario's structures and classify them. That task is developed by the Improved Structures Detection Module. In addition, the pigs and their particular situations must be classified too:

Free Pig:
 it's reachable
 by a direct shot.



Obstructed Pig:
 it's not inside a building
 but it's not reachable
 by a direct shot.



Covered Pig:
 it's inside a building.

The next step is to detect the available birds, special abilities and appearance order. That task is developed by the Special Ability Module.

The attack strategy is to achieve the maximum damage at the first shot by using the least amount of birds.

The priorities order for the next shots are: circular stones, structures that cover the most vulnerable pigs, obstructed pigs and finally the most of the free pigs.

To choose which covered pig should be killed first, we have implemented a series of rules that depend of the type of structure where pig is at and the available bird on the slingshot. Given the conditions, we decided which pig to attack, how to aim and when to use the bird's special ability.

Strategy

The main defined strategy is to achieve the maximum damage at the first shot. To accomplish this, three modules were defined, which are described below.

Improved Structures Detection Module

By using the tools given by the Competition Organizers to get the scenario's objects with their exact location and combining it with the 2014 winners framework, we define the connected block structures as buildings. The buildings classifications are based on their density, which is defined by the detection of the building bounds and their inner occupation. The classification is described below:

- House of Cards: has a density of 40% or less or it has less than four blocks.
- Bunker: has a density greater than 40%.
- Tower: is a bunker which is 30% higher than wider.

Special Ability Module

To achieve a successful attack a method that activates the ability at the desired moment was defined. The method arguments are: sling location, bird's release point location, target location and a percentage. The percentage indicates the distance that must be traveled of the total trajectory before the ability gets activated. Given the particular situations presented on each stage, this percentage is defined based on the available bird and the type of the targeted structure.

Attack Strategy Module

To define a good attack strategy is necessary to detect the scenario's structures and classify them. That task is developed by the Perfected Structures Detection Module. In addition, the pigs and their particular situations must be classified too:

- Free Pig: it's reachable by a direct shot.
- Covered Pig: it's inside a building.
- Obstructed Pig: it's not inside of a building but it's not reachable by a direct shot.

The next step is to detect the available birds, special abilities and appearance order. That task is developed by the Special Ability Module.

The attack strategy is to achieve the maximum damage at the first shot by using the least amount of birds.

The priorities order for the next shots are: circular stones, structures that cover the most vulnerable pigs, obstructed pigs and finally the most of the free pigs.

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