**Surface**

| |
|---|
| +   B: vector <Bump> |
| +   L: vector <Log> |
| -   length: double |
| +   Pixel: int ([120][120]) |
| +   S: vector <Stone> |
| -   width: double |
| +   calculate(): void |
| +   random_generating(int, int, int): void |
| +   Surface() |
| +   Surface(double, double) |

**Bump**

| |
|---|
| -   ang: double |
| -   sigma_x0: double |
| -   sigma_y0: double |
| -   x0: double |
| -   y0: double |
| -   z0: double |
| +   Bump(double, double, double, double, double, double) |
| +   Gauss(double, double): double |

+top    -top

**rover**

| |
|---|
| -   alpha: double |
| -   beta: double |
| -   clearance: int |
| -   heading: int |
| -   speed: int |
| +   top: Surface |
| +   angles(int, int, int, int): int |
| +   rover(int, int, double, double, int, Surface&) |
| +   rover() |
| +   sensor(int, int, int, int): int |

-truck    -truck

**processor**

| |
|---|
| -   A1: int |
| -   A2: int |
| -   B1: int |
| -   B2: int |
| -   truck: rover |
| +   processor(int, int, int, int, rover&) |
| +   processor() |
| +   route(): void |

**Boundary**

| |
|---|
| -   comand: string |
| -   control: Control |
| -   data: int |
| -   log_boundary: string |
| -   log_control: string |
| -   time: int |
| +   Boundary(string, string, string, int, int) |
| +   boundary_func(): void |

-convert    -control

**Control**

| |
|---|
| -   convert: processor* |
| -   data: int |
| -   log_control: string |
| -   time: int |
| -   top: Surface* |
| -   truck: rover* |
| +   Control() |
| +   Control(string, int, int) |
| +   control_func(double, double, int, int, int, int, int, double, double, int, int, int, int, int): void |

## Log

- rad_log: double
- x1: double
- x2: double
- y1: double
- y2: double

+ half_cylinder(double, double): double
+ Log(double, double, double, double, double)

## Stone

- rad_stone: double
- x0: double
- y0: double

+ half_sphere(double, double): double
+ Stone(double, double, double)