# SW File Format (Slin World)

## File Structure

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Order** | **0** | **1** | **2** | **3** | **4** |
| **Item** | [SW Signature](#_SW_Signature) | [SW Metadata](#_SW_Metadata) | [Model List](#_Model_List) | [Object List](#_Object_List) | [Point Cuboid List](#_Point_Cuboid_List) |

## SW Signature

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Byte(s)** | **0** | **1** | **2** | **3** |
| **Value** | 0x53  uint8\_t | 0x57  uint8\_t | 0x00  uint8\_t | 0x00  uint8\_t |

## SW Metadata

|  |  |  |  |
| --- | --- | --- | --- |
| **Byte(s)** | **0 – 3** | **4 – 7** | **8 – 11** |
| **Value** | Model Count  uint32\_t | Object Count  uint32\_t | Point Cuboid Count  uint32\_t |

## Model List

|  |  |  |  |
| --- | --- | --- | --- |
| **Byte(s)** | **0 – 19** | **20 – 39** | **40 – …** |
| **Value** | Model:0  [Model](#_Model) | Model:1  [Model](#_Model) | Model:2  [Model](#_Model) |

## Object List

|  |  |  |  |
| --- | --- | --- | --- |
| **Byte(s)** | **0 – 35** | **36 – 71** | **72 – …** |
| **Value** | Object:0  [Object](#_Object) | Object:1  [Object](#_Object) | Object:2  [Object](#_Object) |

## Model

|  |  |
| --- | --- |
| **Byte(s)** | **0 – 19** |
| **Value** | File name  char[20]  (null-terminated string) |

## Object

|  |  |  |
| --- | --- | --- |
| **Byte(s)** | **0 – 3** | **4 – 35** |
| **Value** | Model Index in Model List array  uint32\_t | Object Position  [Position](#_Position) |

## Position

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Byte(s)** | **0 – 3** | **4 – 7** | **8 – 11** | **12 – 15** | **16 – 19** |
| **Value** | Position X  float | Position Y  float | Position Z  float | Rotation X  float | Rotation Y  float |
| **Byte(s)** | **20 – 23** | **24 – 27** | **28 – 31** |
| **Value** | Scale X  float | Scale Y  float | Scale Z  float |

## Point Cuboid List

|  |  |  |  |
| --- | --- | --- | --- |
| **Byte(s)** | **0 – 23** | **24 – 47** | **48 – …** |
| **Value** | PointCuboid:0  [Point Cuboid](#_Point_Cuboid) | PointCuboid:1  [Point Cuboid](#_Point_Cuboid) | PointCuboid:…  [Point Cuboid](#_Point_Cuboid) |

## Point Cuboid

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Byte(s)** | **0 – 3** | **4 – 7** | **8 – 11** | **12 – 15** | **16 – 19** | **20 – 23** |
| **Value** | Centre X  float | Centre Y  float | Centre Z  float | Dimension X  float | Dimension Y  float | Dimension Z  float |