

## 12 Ambients

Ambient declarations are used to provide static typing over existing JavaScript code. Ambient declarations differ from regular declarations in that no JavaScript code is emitted for them. Instead of introducing new variables, functions, classes, enums, or modules, ambient declarations provide type information for entities that exist “ambiently” and are included in a program by external means, for example by referencing a JavaScript library in a `<script/>` tag.

*TODO: Finish this chapter.*

### 12.1 Ambient Declarations

Ambient declarations are written using the `declare` keyword and can declare variables, functions, classes, enums, internal modules, or external modules.

*AmbientDeclaration:*

```
declare AmbientVariableDeclaration
declare AmbientFunctionDeclaration
declare AmbientClassDeclaration
declare AmbientEnumDeclaration
declare AmbientModuleDeclaration
declare AmbientExternalModuleDeclaration
```

Ambient declarations are only permitted at the top-level in a source file (section 11.1).

#### 12.1.1 Ambient Variable Declarations

An ambient variable declaration introduces a variable in the containing declaration space.

*AmbientVariableDeclaration:*

```
var Identifier TypeAnnotationopt ;
```

An ambient variable declaration may optionally include a type annotation. If no type annotation is present, the variable is assumed to have type `Any`.

An ambient variable declaration does not permit an initializer expression to be present.

#### 12.1.2 Ambient Function Declarations

An ambient function declaration introduces a function in the containing declaration space.

*AmbientFunctionDeclaration:*

```
function Identifier CallSignature ;
```