

```
    // ...
};
```

Making default values obvious for documentation purposes

Configuration objects that bundle a large number of different properties are a popular artifact in large systems. Though the values might be loaded from, e.g., an appropriate configuration file, they often have meaningful default values. In C++03, the default values for these properties would typically be documented in the header file (.h) but actually effected in the implementation file (.cpp), which opens the opportunity for the documentation to become out of sync with the implementation:

```
// my_config.h:

#include <string> // std::string

struct Config
{
    std::string d_organization; // default value "ACME"
    long long   d_maxTries;     // default value 1
    double      d_costRatio;    // default value 13.2

    Config();
};

// my_config.cpp:

#include <my_config.h>

Config::Config()
    : d_organization("Acme") // Bug, doesn't match documentation
    , d_maxTries(3)          // Bug, went out of sync in maintenance
    { }                      // Bug, d_costRatio not initialized
```

Default initializers can be used in such cases to work as active documentation:

```
#include <string> // std::string

struct Config
{
    std::string d_organization = "Acme";
    long long   d_maxTries     = 3;
    double      d_costRatio    = 13.2;

    Config() = default; // no user-provided definition needed any longer
};
```