

TSPLIB in XML format – sample programs

We provide two sample programs: *TransformTSPLIB* transforms the instances from the *.tsp* and from the *.atsp* format into the *XML* file. *Validate* enables to validate an existing *XML* file.

Both programs are written in *C++* and were tested with *gcc version 4.6.3 (Ubuntu/Linaro 4.6.3-1ubuntu5)* for *x86_64-linux-gnu* compiler together with the *Xerces-C++ version 3.1.1* library.

Type “make” in the “Debug” directory to compile both programs. If you want to use some compiler options, use the directive “options” - e.g. “make options=-O3”. Maybe it will be necessary to update the *Xerces* includes and library links.

Note that it is necessary to keep the file *TSPConfiguration.xsd* together with the programs (i.e. to have this file in the directory which is used to start the programs).

You can use the following commands to run the programs on *Linux* systems from the main directory (the *Windows* commands are analogous):

```
./Debug/TransformTSPLIB
./Debug/TransformTSPLIB oldFormat.tsp
newFormat.xml
./Debug/TransformTSPLIB oldFormat.atsp
newFormat.xml
./Debug/Validate
./Debug/Validate newFormat.xml
```

The program *Validate* also contains the classes *Instance* and *Graph* (defined in the included files *ValidateInstance.hpp*, *ValidateInstance.cpp*, *ValidateGraph.hpp* and *ValidateGraph.cpp*) which provide a simple interface and which can be easily used to handle the *TSP* instances. The files *ValidateIO.hpp* and *ValidateIO.cpp* define input methods enabling to obtain an instance of the class *Instance* from a *XML* file.

The detailed *doxygen* documentation is provided in the “doc” directory.

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