An Object Specification Language Implementation with Web User Interface based on Tycoon

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TROLL *light* is a specification language suitable for the description of structure and behavior of objects in information systems [GCH93, GCD+95]. The language allows to describe the part of the world to be modeled as a community of concurrently existing and communicating objects. Apart from a set-theoretic semantics TROLL *light* has a pure algebraic semantics [GH95]. The main underlying idea is to present a transition system where the states represent the states of the specified information system, and state transitions are caused by the occurrence of finite sets of events.

Tycoon is a persistent programming environment [Mat93, MMS95] developed at Hamburg University. It is an open system in the sense that it allows different methods for persistent storage of objects and programs (for example file systems, relational databases, object-oriented databases, etc.) and different methods for handling of user interfaces (for example TCL/TK, Web Browsers, etc.). The underlying programming language TL has a rich type system, and allows for generic programming and external communication. It is orthogonal with respect to persistence, type completeness, and interator abstraction. TL is strictly typed, has higher order functions, is neutral with respect to the data model, and has a small language kernel. TL is the basis for all services in the Tycoon programming environment.

We concentrate on the user interface of a TROLL *light* implementation based on Tycoon. The implementation employs a normal Web browser (Netscape, Mosaic, etc.) for both the exploration of template, i.e. object type, descriptions (for an example see the window in Fig. 1 displaying an author template) and objects, i.e. instances (for an example see the window in Fig. 2 displaying an author object), of these templates. In particular, objects are represented by HTML documents and object references can be followed simply with the Web browser.

References

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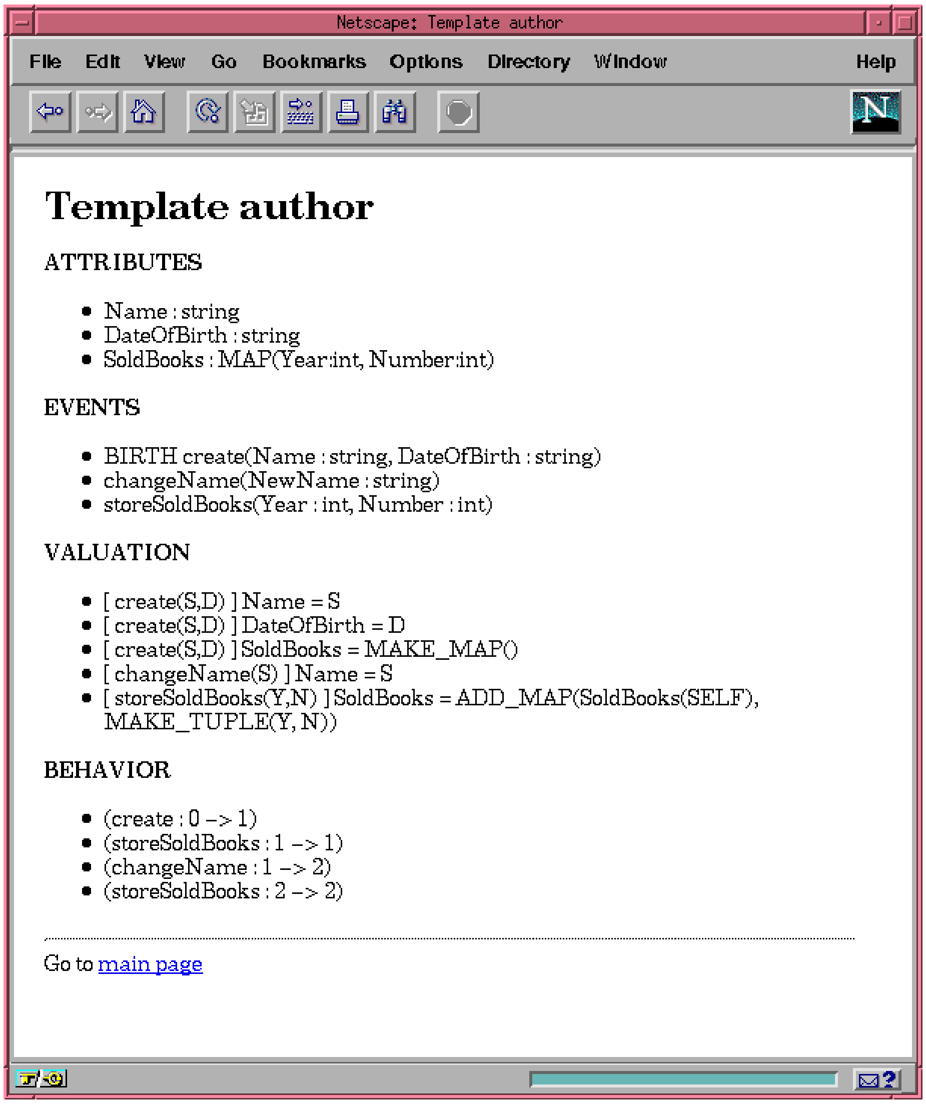

Figure 1: Object template

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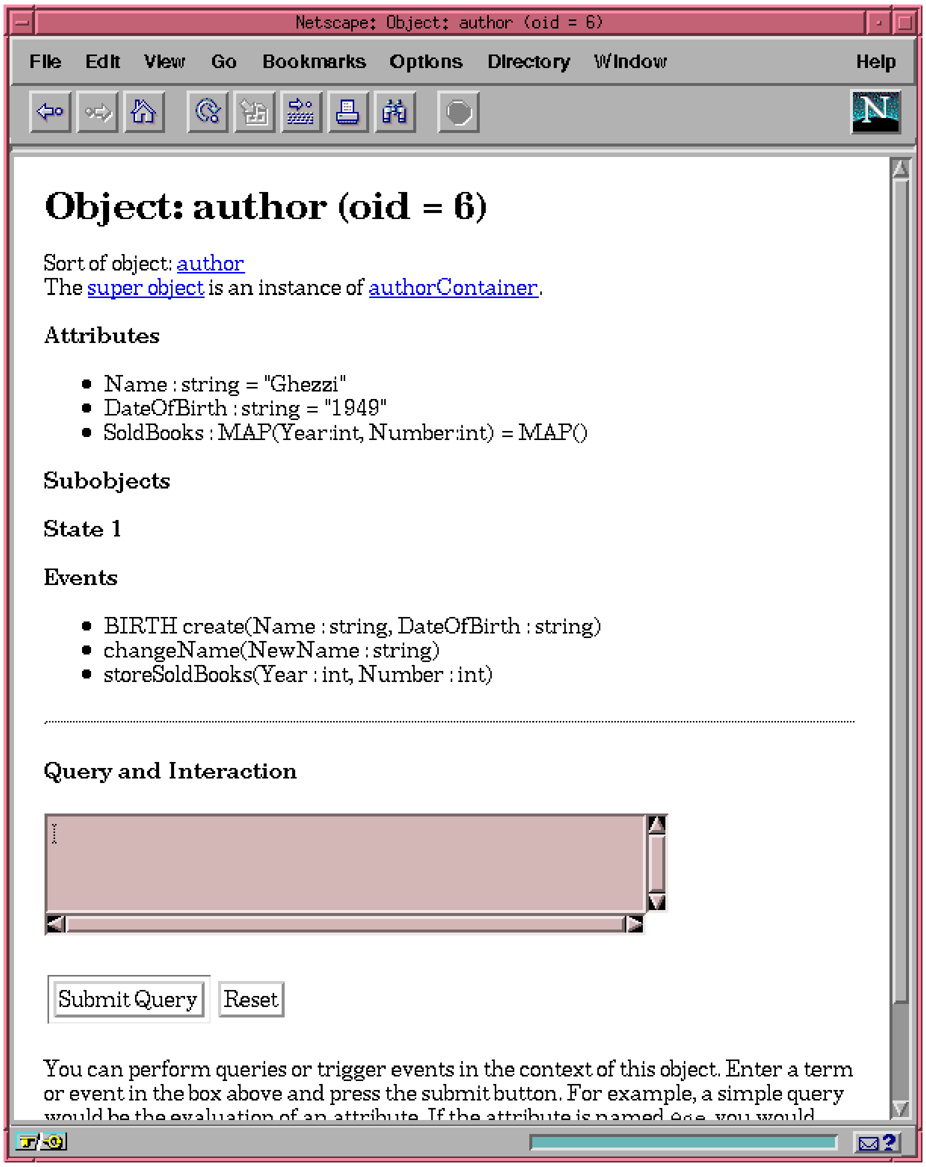

Figure 2: Object instance

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