
Summary: Many useful XML transformations can be expressed by deterministic top-down tree transducers. A normal form is presented for such transducers (extended with the facility to inspect their input trees). A transducer in normal form has a unique canonical form which can be obtained by a minimization procedure, in polynomial time. Thus, equivalence of transducers in normal form can be decided in polynomial time. If the transducer is total, the normal form can be obtained in polynomial time as well.

MSC:
68Q45 Formal languages and automata
68P05 Data structures
68Q25 Analysis of algorithms and problem complexity

Keywords:
XML; top-down tree transducer; equivalence; minimization

Full Text: DOI

References:
[5] Engelfriet, J., Some open questions and recent results on tree transducers and tree languages, ()
[19] Milo, T.; Suciu, D., Index structures for path expressions, (), 277-295
[27] Yannakakis, M., Algorithms for acyclic database schemes, (), 82-94

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