



Correction: Ternary Propagation-Based Local Search for more Bit-Precise Reasoning

Aina Niemetz 
Stanford University

Mathias Preiner 
Stanford University

Correction to:

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The publication of this article unfortunately contained a mistake in Table II. The invertibility condition for bit-vector predicate $(x <_u s) \approx t$ was incorrectly given as $(t \Rightarrow s \not\approx 0 \wedge x^{lo} <_u s) \wedge (\sim t \Rightarrow (s \geq_u x) \approx t)$.

The correct invertibility condition for bit-vector predicate $(x <_u s) \approx t$ is given as

$$(t \Rightarrow s \not\approx 0 \wedge x^{lo} <_u s) \wedge (\sim t \Rightarrow x^{hi} \geq_u s)$$

This mistake was a misprint in the publication only. The corresponding implementation in Bitwuzla (commit [d1984ee8cb37](https://github.com/Bitwuzla/Bitwuzla/commit/d1984ee8cb37), from August 10, 2020) and the verification of the condition presented in this publication used the correct invertibility condition. See also the condition as implemented in Bitwuzla at commit [d1984ee8cb37](https://github.com/Bitwuzla/Bitwuzla/commit/d1984ee8cb37) in function `bzla_is_inv_ult_const`, and the definition of condition IC in the corresponding verification conditions `verify/benchmarks/verify_ic_bvuge_x_s_*.smt2` in the artifact of this publication, available at <https://bitwuzla.github.io/papers/fmcad2020> (published on August 24, 2020 in commit [41cdf4221afb](https://github.com/Bitwuzla/Bitwuzla/commit/41cdf4221afb)).