Correspondence

Correction to "Protocol Conversion"

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In giving a summary of the theory of protocol projection, we made an incorrect statement in the above paper.[1] Specifically, the following statement is false:

For the observer to make correct interpretations of temporal formulas (to determine if they are satisfiable by P) by observing the behavior of P', it is necessary and sufficient that

$$\mathbf{proj}[S(P)] = S(P').\qquad (**)$$

The above is not a necessary and sufficient condition. The correct necessary and sufficient conditions can be found on page 334 of the original paper on protocol projection [1] where they are labeled (F1) and (F2).

Condition (**) is implied by (F1) and (F2) in [1]. Thus, condition (**) is satisfied if the sufficient conditions (A1)–(A3), stated on page 358 of the above paper,[1] are satisfied. Only the sufficient conditions are used in the theoretical development subsequent to the introduction of (**). Therefore, the theory of protocol converters in the above paper[1] is unaffected by the incorrect statement.

Recently, the theory of protocol projection is revisited using a relational notation for system specification. The reader is referred to [2] for a statement of (A3), the condition for well-formed events, in temporal logic.

REFERENCES

[1] S. S. Lam and A. U. Shankar, "Protocol verification via projections," *IEEE Trans. Software Eng.*, vol. SE-10, no. 4, pp. 325–342, July 1984.

[2] ——, "A relational notation for state transition systems," invited talk at the Eighth Int. Symp. Protocol Specification, Testing and Implementation, Atlantic City, NJ, June 1988; available as Tech. Rep. TR-88-21, Dep. Comput. Sci., Univ. Texas at Austin, May 1988.