

Model Comparison

	Evolution Logic	ASM Transducers	WAVE Verifier	Access Control
Core Logic	LTL FOTC	FTL [†]	LTL FO	\subset CTL (\exists path, \forall users)
Domain Assumption	general	db-oriented business logic	web app only	access ctrl only
Points of Approximation	verification may return "maybe"*	finite DB <i>or</i> input-bound	finite DB <i>and</i> input-bound	finite model [‡] (fixed users)
Concurrent Users	yes	yes	no [§]	yes

- * ETL can express the halting problem (F halted), so verifying whether or not a given program satisfies an ETL formula is undecidable. Therefore, an overapproximation of the program's possible executions (abstract interpretation) is used. The verifier will always terminate, but for some inputs the verifier will indicate that the property is "maybe" true instead of giving a definitive yes or no answer.
- † FTL (First order Temporal Logic) is a subset of FBTL (First order Branching Temporal Logic) which is a superset of CTL*. FTL has first order logic at states, but also has the X operator and the U operator. Basically, it's a branching logic with First Order logic on states plus X and U (which have an implicit A).
- ‡ Transactions are not specified. In general this is fine except that they may change user sets as a side effect. The model needs to be extended with post conditions for side effects.
- § The model does not support interactions between concurrent users; it instead assumes a single user, with a fixed database and a state local to only that user. Further, all runs must begin on the the homepage.