

must be composed in order to support, for example, the generation of the entire system implementation. When different DSLs are used to define the various models, composition rules must be defined between the DSLs.

Simulation: Unfortunately, a simulation of a substantial part of the real world needs to describe different parts and aspects of the world typically using several languages. To run simulations, we need a stable coordination of languages and their respective models for execution. This coordination enables us to understand, for example, whether the models fit together and whether they correctly describe the real world and system to be designed. Examples for coordinated model simulation can be found in various domains, including climate that models whether flow of water, cultivation of areas, run in parallel, and etc. Other simulations are used to understand how control devices in a car cooperate or how the multitude of existing devices in an airplane can be managed by pilots for example.

References

1. Balbo, G.: Introduction to generalized stochastic petri nets. In: Bernardo, M., Hillston, J. (eds.) SFM 2007. LNCS, vol. 4486, pp. 83–131. Springer, Heidelberg (2007)
2. Combemale, B., Deantoni, J., Baudry, B., France, R., Jézéquel, J.-M., Gray, J.: Globalizing modeling languages. *Computer* **47**, 68–71 (2014)
3. Erdweg, S., et al.: The state of the art in language workbenches. In: Erwig, M., Paige, R.F., Van Wyk, E. (eds.) SLE 2013. LNCS, vol. 8225, pp. 197–217. Springer, Heidelberg (2013)
4. France, R., Rumpe, B.: Model-driven development of complex software: a research roadmap. In: Briand, L.C., Wolf, A.L. (eds.) Proceedings of the Future of Software Engineering Symposium (FOSE 2007), pp. 37–54. IEEE, July 2007
5. Herbsleb, J.D.: Global software engineering: the future of socio-technical coordination. In: Briand, L.C., Wolf, A.L. (eds.) Proceedings of the Future of Software Engineering Symposium (FOSE 2007), pp. 188–198. IEEE, July 2007
6. Herbsleb, J.D., Grinter, R.E.: Architectures, coordination, and distance: Conway’s law and beyond. *IEEE Softw.* **16**, 63–70 (1999)
7. Parnas, D.L.: On the criteria to be used in decomposing systems into modules. *Commun. ACM* **15**(12), 1053–1058 (1972)
8. Schmidt, D.C.: Guest editor’s introduction: model-driven engineering. *IEEE Comput.* **39**(2), 25–31 (2006)
9. Whittle, J., Hutchinson, J., Rouncefield, M.: The state of practice in model-driven engineering. *IEEE Softw.* **31**(3), 79–85 (2014)