Abstract: People who are engineering biological organisms often find it useful to communicate in diagrams, both about the structure of the nucleic acid sequences that they are engineering and about the functional relationships between sequence features and other molecular species. Some typical practices and conventions have begun to emerge for such diagrams. The Synthetic Biology Open Language Visual (SBOL Visual) has been
developed as a standard for organizing and systematizing such conventions in order to produce a coherent language for expressing the structure and function of genetic designs. This document details version 2.3 of SBOL Visual, which builds on the prior SBOL Visual 2.2 in several ways. First, the specification now includes higher-level “interactions with interactions,” such as an inducer molecule stimulating a repression interaction. Second, binding with a nucleic acid backbone can be shown by overlapping glyphs, as with other molecular complexes. Finally, a new “unspecified interaction” glyph is added for visualizing interactions whose nature is unknown, the “insulator” glyph is deprecated in favor of a new “inert DNA spacer” glyph, and the polypeptide region glyph is recommended for showing 2A sequences.

Keywords: diagrams; SBOL Visual; standards.