FORMAL DESCRIPTION LANGUAGE FOR BOLIVIAN SIGN LANGUAGE (BSL): AN OPEN TOOL FOR USE IN OTHER SIGN LANGUAGES

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ABSTRACT

Within the context of communication for deaf individuals, the development of a formalized language and a compiler is presented, serving to facilitate the creation of animations for Bolivian Sign Language (LSB – from spanish: Lengua de Señas Boliviana) signs, and is adaptable for use in other sign languages. The system uses domain-specific language (DSL) that defines each sign as a sequence of poses based on vectors and finite variables, integrating central repetition and speed functions to facilitate writing. The results highlight the potential of its use to improve the accessibility and scalability of tools focused on the Deaf community, so as not to be limited by the language of their region, establishing a basis for future advances in assistive technologies for Deaf users.

Keywords: Deafness, sign language, animation, language, compiler, Python

DOI: 10.23881/idupbo.025.1-8i