Mots clés :

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- Unité de recherche : Laboratoire d'Informatique Signal et Image Electronique et Télécommunication
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Résumé du projet de recherche (Langue 1)

Communication difficulties, either because of cognitive impairment or simply a lack of linguistic knowledge for non-native speakers, children etc. is an issue in all parts of the world. Moreover, there has been an obvious shift from textual messages to more visual variants taking many forms. Over the last decade, there have been numerous research projects targeting text to image representation in academia, not having yet reached full industrial levels [1,2,7]. They offer an interesting path to communicating better by enabling a first step in visual representation of an otherwise fully intellectualized description. But in most cases, those only offer static representations, hence lacking both the power and precision of representation that is only allowed by animation. Moreover the very temporality of the reading of a text is often an essential part of its core interest. The recent break-through in automated animation should allow some advances in text-to-animation solutions, especially linked to literature material. In the last decade, approaches coming from artificial intelligence, more specifically deep learning allowed to improve considerably many tasks coming from Natural Language Processing (NLP) such as machine Translation, text language modelling, speech recognition, etc. These approaches involve the use of recurrent neural networks (RNN). Such networks are sequence models that take into account the temporal component. For instance, one can mention Long short-term memory (LSTM) networks [3,4], Gated Recurrent Units (GRU) [5], Bidirectional networks [6], etc. The goal of this thesis is to provide a generic framework, allowing the creation of a text-to-animation system using these recent and promising approaches.