A Tightly–coupled XML encoder–decoder for 3D Data Transaction: A City Modelling Scenario

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SUMMARY

Gaining interoperability for data transaction in Spatial Data Infrastructure (SDI) leads to increase of data volume has long been discussed in recent years. In order to solve large data volume arises due to XML self-describing capability, which is used in CityGML, a schema-aware encoder (CitySAC) is invented and achieved better compression ratio and require lesser time, compare to the state-of-the-art Lemper-Zipf-Markov (LZMA) algorithm. While geometric and semantic data is equally essential over the web services especially for analysis, the use case of this schema-aware encoder is defined. A decoder is created with proposed query interface, capable to perform direct query onto the compressed document. This paper discusses the schema-aware encoder background of development and the related works; as well as the showcase of tightly-coupled encoder-decoder over web service data transactions in city modeling scenario

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