

Data visualization is a powerful tool to communicate data in a clear, digestible format through graphical means. But in order to be effective, form and function need to work in tandem, filtering layers of noise to reveal the key aspects of the analyzed data. Indeed, this could prove to be sufficient in discovering already known patterns. However, the search for undiscovered patterns would require the full dataset to be presented as a whole, which bears the risk of sensory overload. Our sensory systems function as a systemic unit, in relation to one another, dynamically sampling the signals around us to give a concise scene analysis. In order to decipher a complex, multidimensional dataset, a representational system that is able to reproduce the layers of information through different stimulations would be required. We explore the possibilities of using multimodal data representation as a method to communicate multidimensional data, guided by the principles of Gestalt Psychology. Point Cloud, an artwork that implements such explorations through the visualization and sonification of lightning data, is presented as an application of this research.

