

28 September, 2015

Dr. Morris Riedel
Forschungszentrum Juelich
Email: m.riedel@fz-juelich.de

Dr Ben Evans
Associate Director (Research Engagement and Initiatives)
National Computational Infrastructure

T: +61 2 6125 4967
E: ben.evans@anu.edu.au

Canberra ACT 0200 Australia
www.anu.edu.au
www.nci.org.au

CRICOS Provider No. 00120C

Dear Morris,

I would like to express our support for the HORIZON 2020 proposal “Deeply Integrated and Semantic Extended Point Clouds”, as part of the European Commissions Research and Innovation Horizon2020 programme.

The National Computational Infrastructure (NCI) manages and makes available over 10+ PetaBytes of data comprising major national and international data collections which are based on six themes: 1) weather, climate, and earth system science model simulations, 2) marine and earth observations, 3) geosciences, 4) terrestrial ecosystems, 5) water and hydrology, and 6) astronomy, social and biosciences. Collectively these collections span the lithosphere, crust, biosphere, hydrosphere, troposphere, and stratosphere. The data collections at NCI comprises the largest collections of Earth and Environmental data in Australia made accessible within an integrated High Performance Computing and Data (HPC-HPD) environment, which comprises a 1.2 Petaflop supercomputer (Raijin), a 3000 core Open Stack cloud system (Tenjin) and several highly connected large-scale high-bandwidth Lustre filesystems.

A growing number of application domains accessing the data at NCI now require new types of spatio-temporal computations that utilise the original point observations behind these traditional data representations as 3D, 4D, and nD point clouds and further, allow for integration of point cloud data from multiple sources.

This project proposes to advance the concepts, techniques, and solutions for the acquisition, management, data processing and analysis, and visualization of point clouds, in a way consistent with our approach. The high availability, density, capturing frequency, and number of attributes of the NCI datasets will result in massive 3D, 4D, and nD point clouds and will require novel data models, storage and analysis algorithms.

We support the proposal and like to confirm our participation in the user board. The collaborative research of several research institutes and industrial partners is indispensable to develop and explore future technologies and establish new applications related to point clouds. Hence, we would like to offer collaboration, advice and guidance to the project members of the project consortium.

We look forward to collaborating with partners and user board members on “Deeply Integrated and Semantic Extended Point Clouds”. I note that NCI is participating in two existing Horizon 2020 projects: the Oceans Data Interoperability Platform and the EarthServer2 project. NCI supports this complementary proposal and its objectives and look forward to our participation in this initiative.

