The 11ᵗʰ International Symposium on Digital Earth, Florence

DECLARATION

By the International Society for Digital Earth

27ᵗʰ September 2019

We, some 400 scientists, engineers, educators, entrepreneurs, managers, governments representatives and representatives of professional societies from several countries, international organizations and NGOs, have assembled here, in the historic city of Florence, to attend the Eleventh International Symposium on Digital Earth, organized by the International Society for Digital Earth in collaboration with the Italian National Research Council and the Joint Research Centre of the European Commission, being held from September 24-27, 2019:

Noting that

since the concept of Digital Earth was presented in 1998, the state of Digital Earth science and technology has advanced and provided prosperous growth in key areas. Today, a wave of big data has emerged, which is ushering in a new era for the understanding and utilization of Digital Earth through technologies such as cloud computing, artificial intelligence and the internet of things.

Further nothing that

Digital Earth has been at the cutting edge of the development of Earth Science, Information Science, and Space Science and Technology. Digital Earth is a multidisciplinary collaborative effort that engages different societies to monitor, address and forecast natural and human phenomena.

Recognizing that

It was foreseen in Al Gore's Speech in 1998 that "*no one organization in government, industry or academia could undertake the Digital Earth project that would require the grassroots efforts of hundreds of thousands of individuals, companies, university researchers, and government organizations. Although some of the data for the Digital Earth would be in the public domain, it might also become a digital marketplace for companies selling a vast array of commercial imagery and value-added information services*".

Recognizing that

in addition to data collected by government and private sector, more and more personal data are collected through digital devices providing a novel source of relevant information but subject to responsible use to avoid privacy or ethical concern.

Recognizing that

in a Digitally Transformed Society, the increasing speed in technology advancement and its pervasiveness requires agile policies to facilitate digital governance. Such policies need to provide trust and respect of ethics in utilization of the information disseminated.

Realizing that

Digital Earth could become a "collaboratory" platform for research scientists seeking to understand the complex interaction between humanity and our environment.

Realizing the

potential of Digital Earth for the implementation of UN Sustainable Development Goals and in support of a sustainable management of global environmental commons.

Realizing that

Digital Earth needs more engagement of private sector to help in achieving its vision.

Acknowledge

the crucial role and function of ISDE to benefit society: promoting the development and realisation of Digital Earth by facilitating excellence in research and use of appropriate technologies; convening international symposia; ensure wide international circulation of research through its journals; represent Digital Earth community in relevant Forums; and strengthen collaboration with international societies, government, academia, private sector and individuals

We Recommend

a) That Digital Earth expand its role in accelerating information transfer from science to applications in support to the implementation of UN Sustainable Development Goals and in support of a sustainable management of global environmental commons.

b) Further, that every effort be undertaken to develop an understanding on ethics in Digital Earth underpinning, location privacy, and accurate information dissemination of data to information to gain trust of the wider community.

c) Also, that in developing Digital Earth concept, efforts must be made to take full advantage of existing and novel technologies and explore new avenues to facilitate data access and re-use.

d) Further, that the International Society for Digital Earth take proactive role in developing an understanding on digital transformation, digital twins, digital ethics; datafication; digital governance.

e) Further, that the International Society for Digital Earth should continue promotion of scientific research in Digital Earth and its utilization to commercial sector and civic society;

f) Expanding cooperation and collaboration between the International Society for Digital Earth and the international societies, United Nations, World Bank, World Health

Organisation, Food and Agriculture Organization, Group on Earth Observations, in particular with inter-governmental organizations, and international non-governmental organizations;

We Call for

Support from scientists, citizens, government and private sector at all levels in developing science, projects, policies and standards to Digital Earth, and call for appropriate investments in scientific research, technology development, education, and promotion of the benefits of Digital Earth.