IAN DOWMAN SAYS GOODBYE TO UCL

Need to Reach Out to Other Sciences

After a long and rewarding career, Ian Dowman, professor and former president of the International Society of Photogrammetry and Remote Sensing, is retiring from University College London. Even after forty years, it's not a total goodbye: he will keep his room at the university and continue to teach part-time and serve his term at ISPRS, but there will be more time for family and friends. Dowman, on changes in the past and challenges for the future.

What stage, as you retire, has the science of photogrammetry and remote sensing reached?
We have come a long way over the past forty years. Undoubtedly the biggest development has been the change from analogue to digital. That transition has completely changed the way in which information is extracted from images, and has created new applications based on the science of photogrammetry and remote sensing. I do believe, though, that we have reached a plateau now. Basic software development has stabilised, although I have to say that algorithm development for feature extraction, for instance, still needs more development. It is feature extraction that is the area with the most potential for the future. Besides feature extraction, data fusion is another field in which we will see further development. And although work in combining data coming from different sources, such as Lidar, aerial and satellite imagery and radar has been a little slow, we'll see a lot in this particular field in the coming years as well.

What would accelerate these developments?
Undoubtedly collaboration with other fields is important. It is necessary to work together with disciplines such as computer science. We need to break through the silo mentality that still exists in the academic world. This is what has stopped us from allowing disciplines to come together, and we need to change that in order to accelerate. People don't always understand the necessity, so I am advocating working together. You can't force this through policy; it comes down to individuals convinced of the benefits.

Do you have any worries about the future of photogrammetry and remote sensing as a science?
My main worry is where the next generation of scientists in this area is coming from. Far fewer people are trained in photogrammetry nowadays than years ago. There's a danger that people, institutions and organisations are using data without understanding how they were acquired, or explaining them wrongly. Therefore we will need professionals in the future to understand and explain the limitations of data use; professionals able to provide a good use of geospatial data. Those professionals could come in from other fields, like computer science, but still a certain level of knowledge of the ‘geo' component, combined with a mathematical and engineering attitude, is needed. Not an easy one. And I tend to think that, at least from a UK perspective, more young people are going to university, but not choosing the difficult studies involving mathematics and science.

What have been encouraging developments in recent times?
It has been very encouraging to see that India and China are taking part in developments in photogrammetry and remote sensing. These two big countries have been using techniques in a good way for mapping and monitoring, and for disaster management, for example. The use of applications to monitor risks of flooding or earthquake in those areas prone to these natural disasters has given the science a strong foothold in these new economies. Africa, which is a special interest of mine, is getting there as well. There are a lot of hopeful developments in which our science is used in preventing risk by mapping deforestation, urbanisation and air pollution on the African continent. One worry for Africa I should mention, though, is the brain-drain from the continent. Here too faculties are closing and scientists are working in Europe and the United States instead of their home country. We need to stop this trend. ISPRS has committed itself heavily to the United Nations Millennium Development Goals, in particular to that of sustainable development, and we can contribute in other fields, such as health and reducing poverty. Photogrammetry and remote sensing can contribute to reaching these goals. But again, we need scientists behind it.

At its centenary celebrations in Vienna ISPRS will present a new Strategic Plan. Can you tell us a little about the new strategy?
A key challenge for ISPRS is to keep people interested in photogrammetry and remote sensing. We will need to work on that. And, as I've already said, collaboration between different sciences is very important. In ISPRS we are going to seek actively to collaborate and reach out to other organisations in adjacent fields to find synergy at society level as well. We will also be looking to engage national mapping organisations and industry. Key to all of these strategy components is communication. Communicating the message to the outside world is essential, but also communicating within the scientific world, sister organisations and local mapping organisations and industry.

Do you, on the occasion of your retirement, have a message for the community?
I have been working in this profession for almost fifty years. It has been a most rewarding experience, both working at University College

London, in organisations such as OEEPE (now EuroSDR), and in ISPRS. Luckily, I will still be doing some teaching and be member of ISPRS Council, but I am going to combine that with more time for my family. To the photogrammetry and remote-sensing community I would like to say: our community is a strong and committed one; we all need to look out to make sure that our science is used in a good and proper way to the benefit of the community at large.

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