

Supporting the Profession - Interview with Rudolf Staiger



Durk Haarsma, publisher of GIM International, sat down with Rudolf Staiger, FIG President, to discuss the surveying profession as it is now and how it will look in the future.

**GIM International:
Congratulations on becoming
the new president of FIG! Can
you tell us a bit more about**

yourself?

Rudolf Staiger: Having grown up in the Black Forest in south Germany, I studied geodesy at the University of Karlsruhe, after which I spent a year in Paris, France, also studying geodesy, at the National Geographical Institute (IGN). After that I worked for a few years in the private sector, including at Wild, which was later taken over by Leica Geosystems. I then returned to the academic world working as a researcher at the University of Essen and later Bochum. In Bochum, I became vice-president of the university, responsible for research & transfer. I've always enjoyed sports; I used to swim, play volleyball and cycle, and nowadays I love going hiking and skiing – but unfortunately not as often as I would like.

GIM: The profession is in transition. Which new challenges and opportunities is the digital transformation creating for surveyors?

RS: We are currently facing a general and global transition. I see various challenges, such as the rapid pace of technological change and the transformation of our markets and products into becoming more open and less restricted. [This] presents an opportunity, because geospatial products are used by everybody – think of Google Maps or navigation for self-driving cars. Geospatial products are seen as part of a beneficial and necessary infrastructure for the development and well-being of our society, so our products have shifted from being 'invisible' or 'classified' to being an essential and important element of our future digital society. One of the major challenges for surveyors is to show clearly why their professional knowledge is needed to secure and interpret data and optimize the use of the available technologies.

GIM: Another key challenge for the surveying profession is to attract new students to geomatics. What is the right strategy, in your opinion?

RS: The answer to a young person's question 'What am I going to study?' is obviously heavily influenced by the image that they have of the various professions. But how and where is this image created? It is strongly influenced by TV, social media and – most importantly – in school. We should therefore go into schools and present the surveying and geospatial profession, because a lot of school pupils have no idea about our tasks, tools and the way we work. We need to show them current opportunities in our profession and at the same time highlight how interesting and beneficial it can be – also for society as a whole – to work in this industry.

GIM: The acceleration of urbanization worldwide is placing high demands on spatial planning. What is the surveying community's role?

RS: First, we have to deliver all the geographic material and data in maps, 3D models and so on which are necessary for the planning, construction and maintenance of our urbanized world. Spatial planning based on those products is also an important part of our profession. In this respect, our planning specialists should bring in their expertise and ideas, because the catalogue of demands is quite complex: we want to create a future society with improved living conditions, also taking account of aspects like climate change, sea-level rise, limited energy resources and affordable housing.

GIM: In 2015, the 17 Sustainable Development Goals (SDGs) were set by the United Nations General Assembly. How would you define the role of geospatial information in accomplishing these goals?

RS: If you want to 'measure' the 17 SDGs and their degree of fulfilment, it is obvious that more than 70% of the goals are directly related to geospatial data. So, the first priority for our profession is to deliver precise and up-to-date data enabling SDG-related performance to be measured. There is no doubt that the 17 SDGs are important milestones on the way to a better world in order to improve the living conditions for everybody. FIG will support the accomplishment of these goals without restrictions. The role of a professional organization

like FIG is to offer expertise in the form of proposals, approaches or even solutions. In addition to this, with events like our Working Weeks and our Congress, FIG provides platforms where experts from all over the world – coming from academia national mapping agencies, cadastre agencies, private-sector companies and international bodies – can gather and meet.

GIM: National mapping agencies take care of the national geospatial data enterprise, which is a huge task. What is their role in this age of digital transformation?

RS: Up until 1990 the national mapping agencies, along with the national military institutions, had the exclusive access to geospatial data. Nowadays this is totally different: geospatial information has become a public good and is available in high quality, often free of charge. In addition to this significant change, we are facing another challenge in the form of big data. Due to the enormous progress in data acquisition, especially regarding the degree of automation and the speed, it will be essential to develop strategies and software solutions for the handling and treatment of the huge datasets which are collected every day.

GIM: It has been said that UAVs are democratizing geoinformation and turning citizens into surveyors. Is this a hype, or the new reality of a changing geospatial landscape?

RS: It is also said that 'the difference between men and boys is the value of their toys!' This is one possible perspective if we talk about UAVs, but it's definitely too shortsighted because UAVs are offering fantastic opportunities. Let's start with the technical part: at first glance, a UAV is nothing more than a 'flying tripod'. But combining this with new digital cameras and treating the acquired data with SLAM software packages, such as AGISOFT, gives us totally new and exciting products and tools which can be used in a variety of applications. In this respect, UAVs can become a basic toolset for our entire profession.

GIM: In general, how do you see the future of the geospatial societies?

RS: As geospatial societies, we play a very important role: we offer a global platform of exchange for our stakeholders – authorities (national and international), administration, private companies, education and manufacturers. The geospatial societies are supporting and promoting our profession as an entity and our approach is non-commercial and for the sake of the whole profession and our society.

GIM: Which main goals do you hope will be achieved during your presidency?

RS: The FIG 'brand' is very well known and we are the biggest international society representing the geospatial and surveying profession on a very broad base. Nevertheless, except for our FIG office in Copenhagen, we are all volunteers. We have to strengthen our organization and prepare it for the near future. One of the major tasks will be to activate people who are willing to contribute to all FIG's commissions, networks and taskforces in the future. Also, we have to prepare our members for rapid and fast technological change, including the digital transformation and the resulting opportunities. And, last but not least, we want to continue playing an active and well-respected role within the UN system, together with the World Bank and other organizations.

This is a modified version of an article from GIM International January/February 2019

This article was published in Geomatics World March/April 2019

<https://www.gim-international.com/content/article/supporting-the-profession-interview-with-rudolf-staiger>
