

# DATACOMMUNICATION: A LIFELINE BETWEEN LAND ADMINISTRATION ORGANISATIONS AND SOCIETY

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## ABSTRACT

Land administration is the process of determining, recording, and disseminating information on ownership, value and use of land when implementing land management, as stated by the UN ECE Guidelines on Land Administration. Focusing on these processes, one observes a growing importance of datacommunication as a supporting tool.

On the determination side of the land administration process (input), strategic objectives such as faster services to the fast moving property market and to the public administration (tax offices, planning authorities) become possible by offering facilities for electronic conveyancing and easy map updating. Electronic conveyancing techniques such as electronic signatures, encryption, hash values, measures against bit-loss, are applied increasingly. Because the law has to provide legitimacy to the transmitting, submitting and registration of electric documents, changes in the (land) law are necessary. Expertise to define the new legal prescriptions concerning the authenticity of electronic documents, the certification authorities who are empowered to issue digital keys, is available now.

As land registers and cadastres play a increasing role in the knowledge regarding the legal status of land according to public law (the so called public encumbrances) as a complement to the status according to private law, the submission and recording of government documents concerning government decisions on land with an effect on third parties, are within reach. This will contribute to the development of e-government.

Modern portable pen computers allow updating of (cadastral) maps during the field session and make geometric quality management possible in the field, so that detected errors can be investigated and rectified right on the spot. Datacommunication facilitates the transmission of work files of maps from the field to the office in order to establish an efficient work process.

The recording process (throughput) will be improved through internal datacommunication offering a better integration between centralized and decentralized processes. Modern workflow management techniques will become applicable, which will have a positive impact on the management of daily fluctuating supply and demand, because an allocation of the workload is possible at the location where the work force is available that very moment. The integration of work processes allows for combining the

benefits of centralized IT services and decentralized information management. This contributes to today's view that land administration operations should take place on a local level in the proximity of citizens, while at the same time maintaining low level costs through the economies of scale of centralized information processing and storage. Even in the situation that local offices have their own databases, datacommunication makes it possible to have remote access to land information.

On the disseminating side (output) the strategic objective of making land information better, easier and cheaper accessible will be supported by datacommunication. A well-organized front office supported by an efficient back office provides a boost in customer-oriented services. Internet services can be applied here, which require a reflection on opening hours, data quality, liability, data protection and copyright, privacy issues, and pricing policy. Establishing an e-commerce environment will also require decisions on to which extent tailor-made land information products are offered, and how payment will be guaranteed. Land administration will become an important basis of establishing a geospatial data infrastructure.

The author is quite aware that the application of advanced tools as discussed here may flourish in a certain mature institutional environment and when advanced information and communication technology is available. This is not only the case in so-called 'developed' countries. As experiences show (e.g. Central Europe) many countries are making up for lost times as a result of the past, while countries in a luckier situation actually suffer the re-engineering burden of their legacy systems.

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