# **DHARANI: Digitally Signed Land Records of Goa**

Even in the 21st century India, social status is very much defined by the piece of land one owns. Therefore, it is the obligation on the governments to have an efficient as well as an analytical mechanism to ascertain the ownership, type, and nature as well as cultivation pattern of the land. Manual records of land were never accurate and had been the reason of much discordance in the society. To tackle such situations computerization of the land records is the only answer.

### Edited by **ANSHU ROHATGI**

The

Rural

any states in India

started the process of

digitizing the land

records. However, Goa

is one of the first few

of

states in country to complete 100%

digitization of land records. The

Integrated Textual Land Records

Management System, which is named

as a "Dharani" offers comprehensive

computerization process started way

back in 2001 and was inaugurated by

Minister

and wholesome solutions.

then

the

terminated in mid 2002 with implementation of mutation process.

## **KEY FEATURES OF DHARANI**

• Management of Rural (Form I & XIV) and Urban (Form D) Land Records - includes complete mutation process, management and updations.

• Dharani for Crop survey, a "click once" based application with webservices to enable the 187 talathis of Goa to conduct the survey of standing crops during Kharif and Rabi seasons and capture the cultivation details in Form XIV.

• Web enabled Touch Screen Kiosk Interface for direct access by public



**G.H. SUBHASH** Senior Systems Analyst subhash.gh@nic.in







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• Mahiti Ghars providing copy of ROR to public

With advancement in technology, what was introduced as a textual (Record-of-Rights) RoR has been enhanced with modern technology known as digital signature. Allinclusive SWAN network, Goa Broadband Network (GBBN) provides robust connectivity through all the district collectorates as well as talukas of the state. Simultaneously, NIC Data Centre hosts the applications, web services and land records databases.

#### **MUTATION PROCESS AMENDMENTS**

• A 'No Objection' in the form of an affidavit from all the existing coowners of the seller if submitted can waive off the notice service and mutation can be completed within a day's time.

• No notice service and no mutation fees for cases processed by virtue of Tenancy and Mundkar declaration/ purchases.

• No notice service for mutations processed by virtue of a Revenue court order passed under Corrections, Partitions, Amalgamations, Land Conversions and Land Acquisitions.

#### **DIGITAL SIGNATURES**

In the earlier scenario, an electronic RoR was not admissible in the court of law. In order to give legal sanctity to the electronic RoR, digital signatures were introduced. The digital signature adopted has been to ensure authenticity, integrity, and nonrepudiation. Furthermore, it also facilitates authenticity verification through Directorate of Settlement & Land Records (DSLR) website (http://dslr.goa.nic.in) for citizens and other stakeholders.

A digitally signed extract of RoR is

Usage statistics till March 2014		
1	Number of RoR issued/viewed	28,74,985
2	Number of Digitally signed RoR issued	8,513
3	RoR Digitally signed while authorizing mutations	6,376

available for citizens through Dharani Rural v3. At present, repository of Rural RoR is available for one taluka. The digitally signed ROR are being issued by the Mamlatdar's Office since Jan 2013.

#### **DSC ENABLED DHARANI**

• The RoR is digitally signed by the Mamlatdar.

- Authenticity Verification Service made available at DSLR website for citizens and interested agencies.
- Integrity check of digitally signed documents done each time while generating RoR, failed cases are logged and RoR preview prevented.

 Digitally signed RoR & XML SOAP based web services extended to DHARNAKSH portal (http://www.dharnaksh.com) of Government of Goa for generation of Form I & XIV and integrated cadastral map with RoR information (Form J, Form XV).

#### **DHARANIRURAL V3 COMPLIANCE** WITH NATIONAL E-GOVERNANCE **STANDARDS**

XML Signatures with the enhancements of XADES which is a W3C specification was adopted for digital signatures.

• Adopted SHA256 and RSA-SHA256 algorithms for signing process as recommended by CCA

• e-Governance MDDS location codes adopted

• XML SOAP based web services used for communication with discrete and independent land record systems managed by multiple vendors

• UNICODE 5.0 as the character set encoding standard to store multilingual land records data

SQL SERVER REPORTING SERVICES (SSRS) - 2008 is being used to render the RoR

#### **INTEGRATION OF PROPERTY REGISTRATION WITH MUTATIONS**

In order to ensure the seamless mutation process after registration of properties at Sub Registrar's Offices, Dharani & GAURI s/w of Registration Department have been integrated as part of NLRMP (National Land Records Management Program).

### **ACCOLADES FOR DHARANI**

The Directorate of Settlement & Land Records, Goa bagged the CSI Nihilent E-Governance "Award of Excellence" under best "Department Category" for 2009-2010 for its initiatives under Dharani project.

In this age of ubiquitous connectivity, it is vital to not only deliver services anywhere, anytime, but also to ensure that they are legally acceptable. Digital Signatures is one such answer towards the same.

#### FOR FURTHER INFORMATION: JJR ANAND

State Informatics Officer, National Informatics Centre, Goa State Centre, H-Block. Paraiso-De-Goa Porvorim Goa E-mail: sio-goa@nic.in