

# Uranga – Sylvestre Begnis Subfluvial Tunnel



**BOSCH**  
Invented for life

## Industry:

Construction - Transportation

## End User:

**The Raúl Uranga - Carlos Sylvestre Begnis Subfluvial Tunnel**, formerly known as the Hernandarias Subfluvial Tunnel, is an underwater road tunnel that connects the provinces of Entre Ríos and Santa Fe in Argentina, crossing the Paraná River between the capital of Entre Ríos, Paraná, and Santa Cándida Island, 15 km from Santa Fe.

The tube sections measure a total of 2,397 m and have 270 m long access ramps at both ends. At its deepest point the tunnel is about 32 m under the average water level of the river.

The tunnel was opened in 13 December 1969 and ranked among the tunnels with most advanced resources and systems at that time.

## Business Objective:

In 2001, a public bidding was organized and the company V&S S.A. was selected as the responsible for the installation of the CCTV system that the security of the tunnel required. Today, 7 years later, that technology went through a process of improvement and update.

With the support of the Santa Fe and Entre Ríos governments a new public bidding was planned. Counting with the assistance of Bosch's integrator V&S S.A., the bidding achieved the temporary union of two companies: V&S S.A. y HD-Sales.

Technically, the objectives were clear; the tunnel's internal and external visualization was still working in VHS so it was necessary to transform it to digital recording. Also a better visualization, sensibility and quality of the monitors' images were required. In addition it was required to connect the administration video system through networks to provide remote visualization.

## Solution:

In first place it was considered necessary to place a recording and hybrid management system like the Dibos to anticipate future IP enlargements or resolution improvements. In addition, high resolution elements and technology in colors were included, removing the existing combination of color domes and black and white cameras.

22 cameras LTC455, 4 domes G4 line 300, Dibos Systems with 24 analog and 32 IP inputs with 1 terabyte memory, 16 monitors 20" and 5 LCD monitors 17" were installed in the tolls, the control room and the interior of the tunnel.



## Results:

According to V&S S.A. the choice of Bosch products was a direct consequence of their high quality and brand stability. The project cost over 80.000 dollars and was financed by both governments.

The objectives mentioned before were highly accomplished. Thanks to the Dibos internet connection it is now possible to log into the system from all over the world.

The Entre Ríos and Santa Fe governments already have a new project for the subfluvial tunnel: to transform the complete system to optic fiber network, which will take about two years. However, the Dibos system allows taking this plan into action gradually, avoiding the restructuring of the complete installation.

For more information, please visit:  
<http://www.tunelsubfluvial.gov.ar/>

## Installed by:

### V&S S.A.

CCTV, fire and intrusion alarms and system's integrators  
Gral. Guemes 480  
(5000) Barrio Gral. Paz  
Córdoba - Argentina

### Bosch Sistemas de Seguridad

Av. Córdoba 5160  
Buenos Aires, Argentina  
5411 4754-7671  
[www.boschsecurity.com.ar](http://www.boschsecurity.com.ar)