

**PALAIS DE JUSTICE STATION**

ROUEN - FRANCE

**Control of tunnel movements during grouting works**

The construction of the new “Palais de Justice” station in Rouen metro created problems on the existing tunnel :

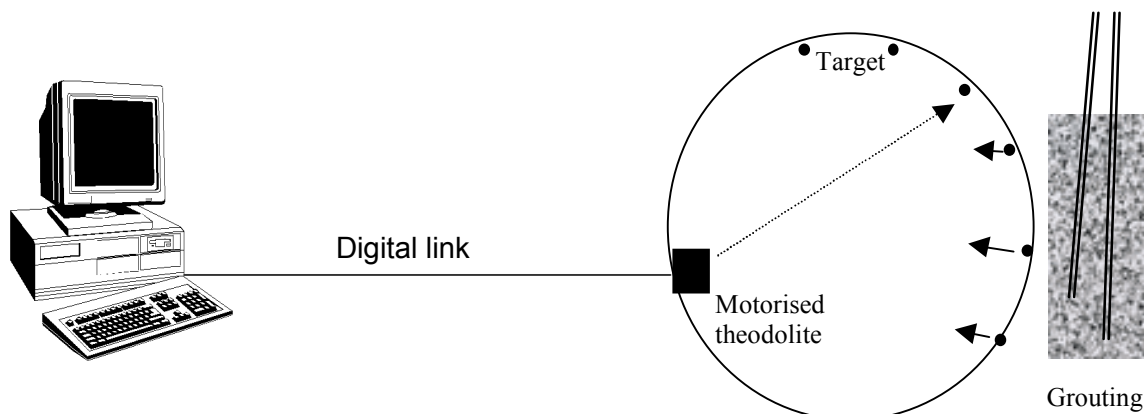
- 5 centimetres movements between segments.
- Decompression on each side of the tunnel.

The stabilisation works had to be carried out without interruption of the traffic.

The Contractor asked SolData to monitor in real time the geometry of the tunnel during the grouting phases.

A CYCLOPS was installed in the tunnel and 40 targets fixed on the segments. The most critical segments was equipped with high precision extensometers.

All the measures were centralised in real time on a control PC at surface. An alarm was sent to the operator when millimetric movement was detected.

*CYCLOPS in live tunnel*

OWNER :

ROUEN METRO

DATE OF WORKS :

1997

**WORKS DONE :**

- Real-time monitoring of tunnel with Cyclops and alarms.