



Program Management

Client

Cableuropa-Ono

Location

Madrid, Spain

At peak production of this network rollout, CH2M HILL directed 450 designers, route surveyors and construction field staff in more than 20 offices in Spain. We managed the work of 92 different contractors and 2,000 contractor personnel in more than 150 cities.

Rapid Build of Hybrid Fibre Coaxial Network

Project Highlights

- Project management, design and construction services for 7 year, communications network rollout, bringing cable to more than 25,000 homes a month and nearly 7 million homes by project completion.
- At the end of 2004 ONO's infrastructure shall pass more than 2,200,000 homes, exceeding its target goal.
- CH2M HILL 's innovative project delivery system and experience with large, complex programs allowed us to rapidly mobilise, allowing ONO to deliver services within 6 months of notice to proceed. This rapid delivery has been critical to ONO's success in its market.

Project Description

CH2M HILL supports ONO in the largest single telecommunications network rollout program in the world, providing support to bid, plan, design, build and activate advanced communications systems in Spain. The new hybrid fibre/coax (HFC) networks will offer voice, video and data services to business and residential customers. This rollout program was quickly mobilised and implemented under a limited timeframe to compete against the incumbent PTT.

Using CH2M HILL's expertise in infrastructure build programs worldwide, ONO is aggressively implementing its physical HFC network to deliver telephony, video, commercial data services and highspeed Internet access to 7 million homes throughout Spain.

ONO, a Spanish company, is a new and fast-growing entrant in the recently deregulated Spanish telecommunications market. With CH2M HILL's assistance in submitting license applications, ONO won 12 licenses in various demarcation areas of Spain.

It subsequently retained CH2M HILL to direct the overall build program. In addition, CH2M HILL provides outside plant design and engineering, construction management and inspection, GIS mapping and database development, field route walkout and activation support. The standardized methods and technologies used by CH2M HILL allow ONO to rapidly implement the physical networks while safeguarding reliability, quality and cost.

Using a centralised program management structure, CH2M HILL successfully coordinates concurrent build programs in numerous geographic areas throughout the country. Network designs are managed and produced in a central location to capitalise on standardised techniques and proven processes for continuous improvement.

In its Madrid office, CH2M HILL provides program management support including budgeting, scheduling, resource levelling, policy making and procedural implementation for design, construction and activation standards. CH2M HILL also supports ONO's efforts to obtain license applications,



conduct strategic fundamental planning, acquire requisite permitting and integrate new technologies and equipment.

CH2M HILL works with ONO equipment vendors and municipalities to develop comprehensive and efficient network fundamental plans. Detailed planning efforts undertaken at the project beginning maximise network reliability, flexibility and performance, while minimising trench, power and construction time and cost.

For network route and preliminary design, CH2M HILL implements field route walkout, geographic information system (GIS) mapping and database development. This database includes maps depicting physical, census, socio-economic and field route information to provide the platform on which network designs are developed. The database is later turned over to ONO, complete with as-built drawings for long-term marketing and maintenance operations.

In the regional field offices, CH2M HILL provides field route design and construction management services to implement the HFC networks. Equipment needs, contract management, schedules and labour issues are handled through these onsite offices.

For central office and switching facilities, CH2M HILL is managing the design, construction and equipment/switch installations in each of the 12 license demarcation areas across Spain.

CH2M HILL maintains all implementation documentation during the network design, construction and activation phases. This information is then digitised into the GIS database upon network completion and incorporated into the operations support system (OSS). The documentation and digital cataloguing of network critical elements allows ONO to reduce its network lifecycle maintenance costs by applying powerful management tools.