

# TV 2, Norway



TV 2 is Norway's largest commercial TV channel with its headquarter in Bergen and another office in the nation's capital Oslo. TV 2's first transmission was on September 5th 1992 and has grown to a multi-channel platform with a focus in three main sectors news, sports and entertainment. These include TV 2 Zebra, TV 2 HD, TV 2 Nyhetskanalen (News Channel), TV 2 Filmkanalen (Film Channel), TV 2 Sport, TV 2 Science Fiction, TV 2 Barclays Premier League, TV 2 Bliss, TV 2 Sumo which is their IP service. TV 2 is recognized in the top 5 brands Sumo

which is their IP service. TV 2 is recognized in the top 5 brands in Norway and has continued to innovate and invest into new technologies. TV 2 was the first broadcaster in Norway to air live 3D broadcast of a football match and is also the first to have a round the clock news channel in Norway, TV 2 Nyhetskanalen.

## Project:

TV-2 was tasked with providing coverage of Vasaloppet in Sweden. Vasaloppet, literally the Vasa race is an annual long distance (90 km) cross-country ski race held on the first Sunday of March in northwestern Dalarna, Sweden between the village of Sälen and the town of Mora. It is the oldest, the longest, and the biggest (in terms of participants) cross-country ski race in the world. Next years race was fully booked in ten minutes with the maximum participant of 15,800 entrants.

The site survey from TV 2 included 3 different locations with distances of 15km and 45km between broadcast transmission sites. The options were to use localized production trucks at each location, and provide sufficient staff to run each site with transmission back to a local point via satellite services. The other option was to provide fiber connectivity between the sites and use remote production from two of the sites back to the master site.



## Scope:

TV 2 needed to provide a cost effective and low maintenance solution for Vasaloppet. The distances involved were quite large. TV 2 looked at bringing in trucks for each location that was remote. But when counting the equipment needs, the production staff hours and technical assistance needed, it was becoming a larger production then TV 2 could imagine.

The result was that TV 2 chose the miniHUB optical distribution due to cost of operation. miniHUB could give these results with its configuration flexibility and extremely good optical budget.

Using the miniHUB system meant that no remote truck facility had to be used with only minimal associated camera equipment and minimal personnel needed for the event. This was a huge saving to TV 2 and paved the way for more remote productions in the future.



## Solution:

TV 2 decided to use an 8 channel CWDM system from Norwia. They used the NEW 8 channel Ultra Low Loss CWDM filter. This gave only 2.6db loss over the multiplexer pair for the entire CWDM link.

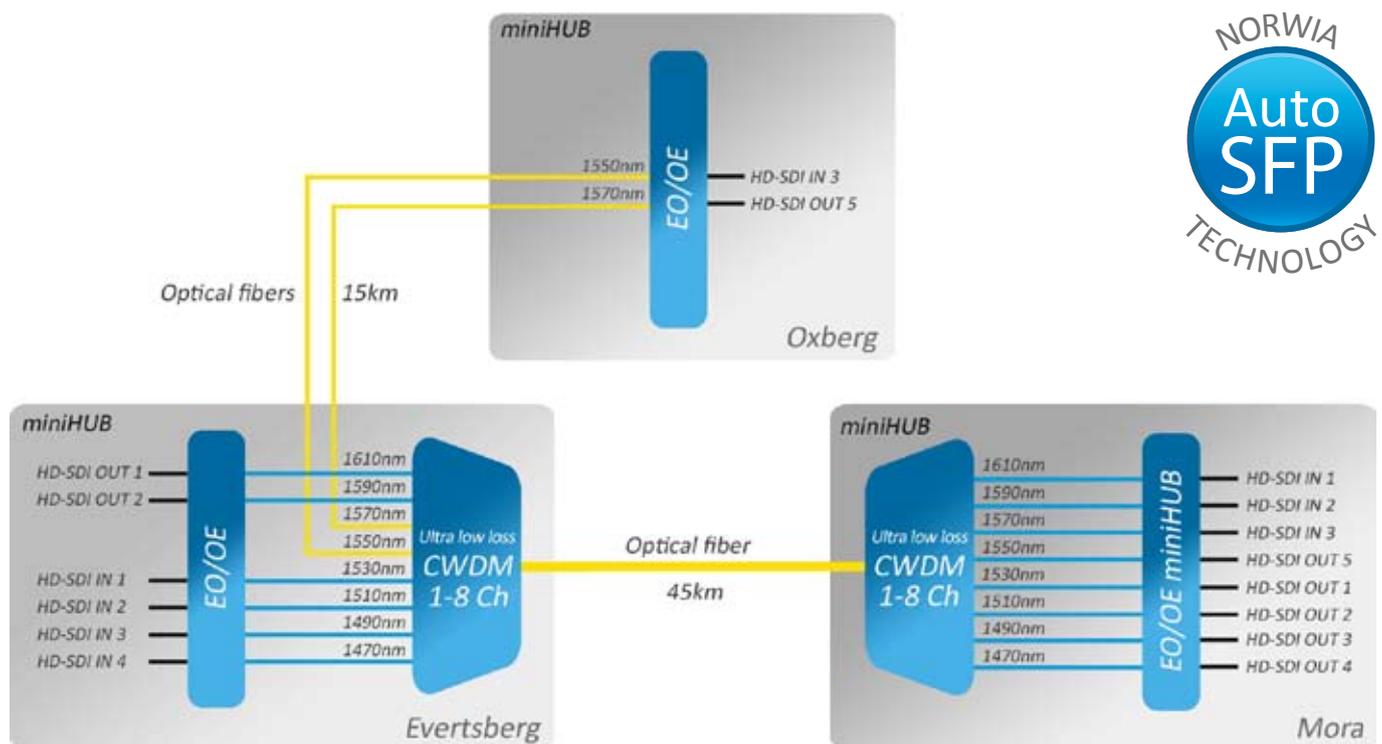
With some smart optical design the third location was feed optically passive from the 45km CWDM link. This saved the need for a second CWDM system to be installed. 2 CWDM channels were fed a further 15km with no electrical refresh. This meant that the total distance for the optical network was 60km. With the available optical budget, this link could have supported up to 90km of HD-SDI uncompressed video.

CWDM is an effective solution to deliver multiple uncompressed channels on one fiber over a distance. The distance varies in typically applications from 100 metres up to 90 kilometres.

## Customer:

Bård Egil Torgersen from TV 2 - Norway, remarks that; "Once we weighed up the options between remote broadcasting and production truck installation, it was quite obvious that the Norwia miniHUB optical distribution system was an easy choice. The miniHUB system is like no other on the market today, with its AutoSFP™ technology. This makes life easy out in the field, and shows the flexibility and smartness of the Norwia miniHUB system".

## Technical:



Norwia provides a format flexible, application flexible optical fiber distribution product that makes a very clear statement when it comes to cost of ownership. Features such as add/drop/pass, optical distribution and transponder functions are available to TV 2 with the existing product installed, making the flexibility of this next generation system from Norwia an ideal choice for this project.

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