

## HIPPS

### THE CUSTOMER

The largest oil company in Norway, Statoil. With oil and gas drilling platforms, oil and gas pipelines from the North Sea to continental Europe.

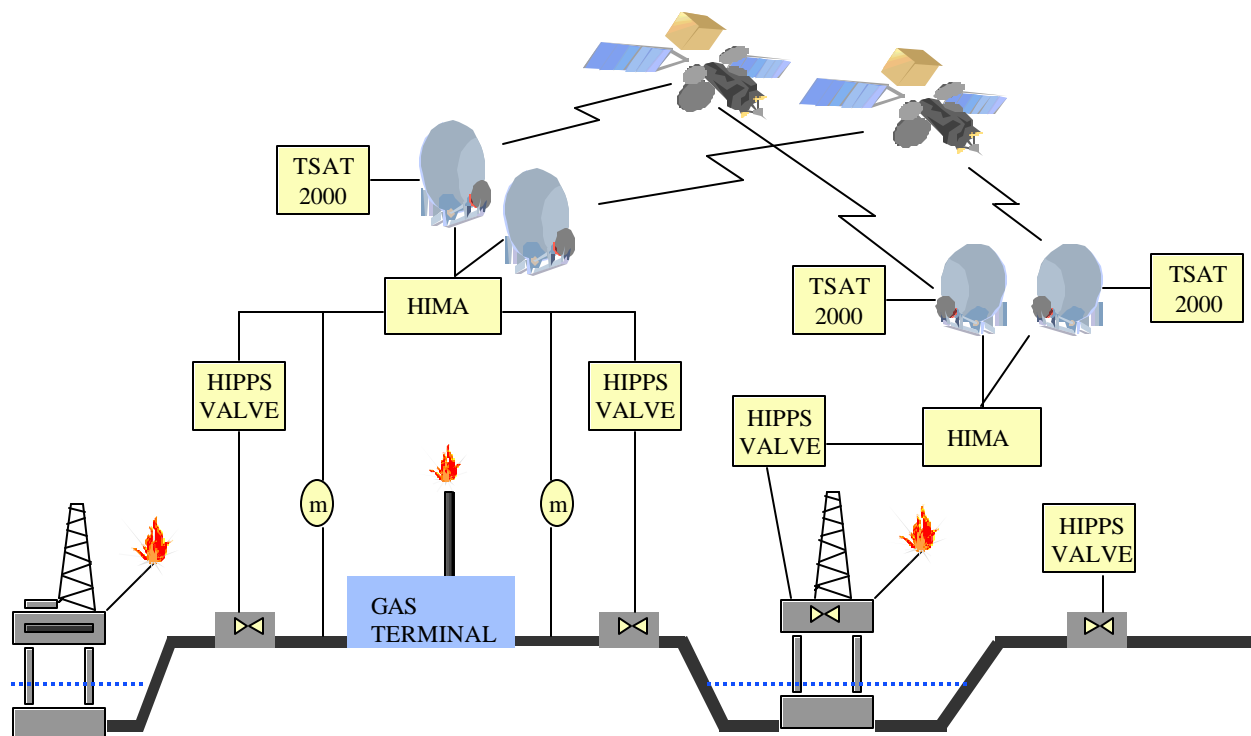
### THE NETWORK

The network consists of 2 remote TSAT stations and 2 centrally located HUB's. One set of Hub and RT is supplied as to assure a fully redundant communication system. The HUB's are placed onshore, and the remote terminals are placed on the oilrig. Both remote stations are equipped with

specially designed fibreglass Radome for protection against seawater and strong winds.

### THE APPLICATION

A TSAT system was designed and delivered to the client - Statoil, to allow a sequential shutdown. By increasing the pressure in the pipelines, and through careful monitoring of the valves, it is possible to extend the lifetime of the pipelines by 5-10 years before any replacement is required. The information from these pipes is fed back to the main control centre on shore, using TSAT 2000 satellite communication.



**NETWORK SCHEMATIC**

## THE INTERFACE AND THE EQUIPMENT

Interface: RS 232

Data rate: 1200 bps

Availability time: closest to 100%

Backup: One set of TSAT 2000 and one terrestrial line

## FACTS IN SHORT

Application	Remote monitoring and control of gas pipeline
Network	2 Hub and 2 Remote Stations
Interface	RS 232
Application	HIPPS
Application protocol	HIMA
Application interface	9600, N,8,1
Speed Satellite Link	1200 bps
Package size	25 Bytes
Average message size	20 bytes
Response time requirement	3 seconds
Uptime per day	Close to 100%
Antenna mount	Hub standard, both RTs equipped with fibre glass Radome
Temperature environment	Summer: up to +30 <sup>0</sup> Centigrade Winter: down to -15 <sup>0</sup> Centigrade
Wind environment	Hurricanes and full storm combined with snow and ice not unusual
Humidity environment	5 - 60%
Implementation	March 1996
Location	South-West coast of Norway
Satellite	Intelsat 707 and Eutelsat IIF4
Service Provider	Telenor Satellite Services, Norway