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Intergy Large Systems for Cable and Wireless Optus and the Southern Cross Cable

Cable & Wireless Optus (CWO) is one of the major full-service telecommunications carriers in Australia. The Company holds 40% of the shares in the Southern Cross Cables Group and was also selected as the Australian Landing Party for the Southern Cross Cable Network.

The Landing Party carries the responsibility of obtaining all permits necessary to lay the cable segments in the Australian territory and for the construction of the Australian landing facilities. These comprise two cable landings and two cable stations.

The two cable stations, one in Alexandria about 7km south of the Sydney CBD and the other in Brookvale about 13km north of the CBD, have Intergy DC power systems with Intergy R5848 100/120A, 48V rectifiers.



David Young at the Alexandria cable station in Sydney.



One of the two Intergy Large systems installed at the Alexandria cable station.

The architecture of the DC Power Supply Systems in Australia was specifically developed for the Southern Cross application by David Young, Southern Cross Landing Design Manager, Cable & Wireless Optus and Peter van Dyk of Engineering Research and Design. It has significant performance advantages and maintenance features compared to most "run-of-the-mill" DC supplies.

The rectifier racks are dual fed from two Technical Power distribution boards. Each Technical Power distribution board is fed from its associated main switchboard. Manual switches in the top of the rectifier rack allow pairs of rectifiers to be supplied from one supply or the other.

Normally approximately 50% of the rectifiers are on each supply. There are two DC Power Supply Systems at Alexandria and one at Brookvale. Each DC Power Supply System is presently fitted with ten rectifiers and in each supply, spaces have been provided to add a further ten rectifiers. Each DC Power Supply System has an on line SM50 supervisory module and a spare SM50. The number of DC Power Supply Systems provided is based on the anticipated load at each site.

Intergy DC power systems were selected for the sites as a result of the tendering process which took into account cost and service factors. However, the ability of the Intergy rectifier to provide 120A at 48V and below has proved a significant advantage in not having to provide additional rectifiers for the battery recharge current in addition to the normal load current.

"Powerware has been a helpful company to work with, particularly when CWO had some difficulties with the original system integration contractor. These difficulties resulted in CWO undertaking the integration of the third DC Power Supply System itself and as a result we were then working directly with Powerware. This direct relationship was far more satisfactory," said David Young.