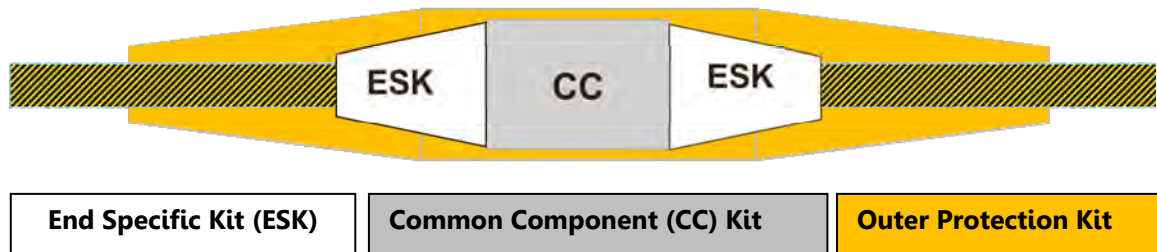




What is meant by Universal Jointing?

Universal Jointing is a method of connecting all types of submarine optical telecommunication cables with a common set of construction equipment & methods



The benefits of the Universal Joint (UJ) for the repair and installation of subsea fibre optic cable systems are widely acknowledged within the Telecommunication Industry. Since its first installation in 1990 the technology has proven its reliability in-service and provides an efficient and cost effective method of connecting most types of submarine optical telecommunication cables, using a common set of equipment and standardised piece parts

BENEFITS - SYSTEM OWNER

Low cost capital expenditure in jointing tools, piece-parts and services - only one technology, eliminating the added cost of acquiring all proprietary technologies relating to the system cables

Lowest cost operating expense - Common standard for training and re-qualification

More options for cable sparing - Inter-cable connectivity means that for multi-supplier systems, competitive purchase and sharing of spare cable are possible

Wider choice of service providers: Competitive procurement of jointing piece-parts, training and maintenance services from independent vendors.

Time proven: UJ is a technology based on sharing industry expertise which has offered outstanding performance for over twenty years

BENEFITS - MAINTENANCE PROVIDER

Lowest cost of capex/opex with only one technology to support. The added cost of acquiring all proprietary technologies relating to the cable in the system is eliminated, greatly reducing the variety of kits to be kept in inventory and the amount of shipboard equipment and operator training required

Ability to operate on most cable systems maximises ship flexibility

BENEFITS - TO THE INDUSTRY

Optimised cost of system maintenance

Common philosophy and standards

UJC members:



Universal Joint Pedigree

For **TAT-8** (commissioned **1988**) the system suppliers, *Cable de Lyon*, *AT&T*, and *STC*, cooperated to integrate their own proprietary Interconnection Devices ~ *integrating three separate designs was costly and troublesome*

As **TAT-9** progressed a single joint concept was developed by *AT&T* (now *TE Subcom*) and *BT* (now *GMSL*) to simplify future maintenance ~ *this became the UJ technology*.

In **1990** *Câble de Lyon* (now *ASM*) joined the consortium.

In **1992**, after the success of UJ in the Atlantic, *KDD* (now *KCS*) joined the agreement as it was introduced into the Pacific.

In **1996** a new product, the Universal Quick Joint (UQJ) and agreement was developed for the short-haul non-repeated market.

In **2000** The predecessor organisations of *TE SubCom*, *Kokusai Cable Ship (KCS)*, *Alcatel-Lucent Submarine Networks (ASN)* & *Global Marine Systems (GMSL)* combined agreements for the UJ and the UQJ to form a single agreement under the

Universal Jointing Consortium (UJC)

recent cable systems where UJ has been used as the maintenance solution include: APCN2, Flag, SMW3&4, Unity, EASSy, EIG, WACS

UJC ruling principles

Advance the state of the submarine cable jointing arts, through sharing of the expertise for the mutual benefit of the submarine cable industry

Optimize customer return on investment in the technology

Assure the uniform introduction of new and tested improvement to this technology in a cost-effective way

Maintain common technical, manufacturing and engineering information:

Quality Plan & Training Standards

Common technology & Qualification Specifications

Joint Piece Parts Design & Qualification

Equipment & Specific Tools Design

Engineering Data Repository (HDB)

Comprehensive Joint assembly instructions (UJCM and UQJCM)

Consistent technology transfer to UJC Member Schools

Communication through Bulletins & Web Site

Independent Supply Chain

As *independent companies*, in commercial competition, the consortium members offer

Jointing Kits, Equipment and Tooling

Jointer Training & Certification

Qualification of cables and cable variants

For contact details and latest product and cable qualification information please visit

www.ujconsortium.com