

CHAPTER 5

5.45. In the Survey, 6 of the 10 in-house departments had a CMS thus fully configured, either taking advantage of features in their existing CMSs or by adding features themselves in a way that was practically indistinguishable from integration. All 6 could then use the report writer associated with their system to produce a “datasheet”³⁸ for each invention “at the touch of a button”. These datasheets are the workhorse of the departments’ patenting strategy work, collecting together the important information on each invention so as to allow easy reference. The datasheets (viewed on screen or printed out) are used when the attorney seeks the client’s views on maintenance, either on a single case (as when the renewals on a single family are being considered), or if a large number of inventions are being considered simultaneously (see paragraph 5.66). Figure 5.5 shows a datasheet for an invention (essentially fictional). The first section (down to the inventors) displays most or all of the information from the family record; the second section is derived highly selectively from the country records (in which most of the information is irrelevant for patenting strategy work); the third section reproduces the commercial status narrative; and the fourth section reproduces the official technical abstract.

Case reference: A1234		Family status: LIVE					
Internal title: WATER-PROOFING OF OPTICAL FIBRE WITH SOLDER							
Client: BLOGGS OPTICAL PLC							
Client Business Unit: Telecomms Division, Fibres and Cables							
Client classification: Advanced concepts							
Fallback Business Unit: Telecomms Division, Submarine Systems							
Origin of invention: Business Unit Central Research; Programme B3, Project 9876							
Client contact: Dr Fred Smith							
Attorney: Jane Brown							
Outside parties: Blenkinsop Metals Limited; Whizzo Fibres plc							
Strategic classification: Fibre post-treatment. Rating: SILVER.							
In use by client: N. Infringement suspected: Y. Licensed: N. Transaction: N.							
Linked files: F1234; J1345							
Keywords: TELECOMMUNICATIONS; FIBRE; WATER; CABLE; SUBMARINE							
National security: No Section 22 order.							
Inventors: Arnold Baxter; Frederick Smith; Joseph Temple							
Country	Priority date	Filing no	Effective filing date	Publication no	Grant no	Grant date	Status
EP		08001567.3	20 Jan 2008				DEAD
EPw	20 Jan 2008	09001111.5	18 Jan 2009	2140000			PENDING
EPw2	20 Jan 2008	11005678.4	18 Jan 2009				PENDING
JPw	20 Jan 2008	003456/2010	18 Jan 2009	2011/123456			PENDING
USw	20 Jan 2008	320000	18 Jan 2009	2010/111555	8200000	01 May 2012	GRANTED
WO	20 Jan 2008	GB2009/01234	18 Jan 2009	2009/122486			NATPHASE

PATENTING

Commercial status narrative

Optical fibres degrade if exposed to water from the environment. Protection is conventionally provided by a metal sheath enclosing the entire bundle of fibres in a cable. FIBRES AND CABLES have discovered that equivalent protection can be provided by applying a layer of commercial tin-lead electrical solder to each individual fibre on top of the silicone polymer coating which is normally used to provide mechanical protection to the fibre. Cables of reduced complexity and weight should be achievable by use of the solder protection.

Specially-formulated grades of solder may be better than the commercial grade used to date, and FIBRES AND CABLES are in confidential discussion with Blenkinsop Metals Limited (case reference F1234) concerning these. In early 2012, Whizzo Fibres plc offered for sale "Water-safe fibre", and we are investigating (case reference J1345) how their fibres work.

SUBMARINE SYSTEMS are potential users of such fibres.

At present, protection in the G7 countries, minus Canada, plus Sweden and the Netherlands is considered desirable, all of which have optical fibre manufacturing plants. (It is envisaged that the solder will be applied immediately as the fibre comes from the glass-drawing and polymer-coating stages of conventional production, *ie* without intermediate reeling as in our experiments to date.)

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PERSONS CONSULTED: FRED SMITH, Central Research, EDWARD JONES, Fibres and Cables

Official technical abstract

A structure is provided which consists of an optical fibre (1) with successive coatings of a polymer (2) and a metallic material (3). The fibre may be a silica optical fibre. The polymer may be a silicone polymer. The metallic material may be an alloy of tin and lead of near-eutectic (60:40) composition. The metallic material offers protection against water to the optical fibre. Cables incorporating the fibre structure are described.

The structure may be manufactured by passing the fibre, previously coated with the polymer, through a bath of a metallic melt at a temperature of less than 230 °C at speeds in the range from 5 to 20 metre/second.



Figure 5.5: An essentially fictional datasheet produced by the CMS of Figure 5.4. The cross-references to other cases assume, for the sake of definiteness, the case-referencing scheme of paragraphs 3.16 and 3.20.

38. The neutral term "invention datasheets" is used here even though practices may give them names with internal resonance reflecting the pride that they have them.