Question for the General Paper D57

Answer all parts of the question

A company wishes to use the Internet Technology for much of its business. It operates development operations in both the UK and US, has its marketing and headquarters in the US, but has large marketing groups in eight other countries also in Europe and America. In each country it has a National Headquarters, with some 300 staff, and 6 small regional offices - each with 6-8 salesmen/office; half of the salesmen are normally travelling - and are only in the office every second week. The primary marketing information comes from the US headquarters. The production is distributed in two plants in each of four countries - each plant acts as the primary supplier of some goods, but all items are made in at least two locations. Reasonable stocks are held in national depots; the manufacturing plants also carry substantial stocks.

Its whole catalogue contains some 10,000 pages - of which 200 change each month; each page has a fair amount of illustrative material, and hence requires 100 KB of data (including some audio annotation).

The Company has decided to modernise its techniques to include the following aspects:

1. Provide an illustrated version of its total product catalogue to be accessible via the World Wide Web (WWW).

2. Sell its products through the WWW including the payment for goods, and providing human assistance to customers wishing further information about the goods in the catalogue.

3. Provide the catalogue in the local language - and the translations are farmed out to an outside agency in each country requiring language change.

4. Up-date its sales force - which operates in eight countries in Europe and America - on advances in its product range. This updating will be continuous via the WWW, but there should be also monthly two-hour fully interactive sessions, with audio, video and animated brochure material from the marketing headquarters, and at least audio or low quality video feedback from the sales office.

5. Be in a position to support enquiries from 500 people simultaneously in each country.

6. If items are in stock, they should be delivered within 48 hours - and the customer should have an indication of the delivery schedule before the salesman leaves his/her client.

CONTINUED

Describe the sort of computer and communications system you would put in, giving reasons for your choice. In your response, address specifically the following points:

- The type of information which should be held on the WWW primary servers and their capacity;
- Should any of the information be replicated - and if so how, why and where; what are the communications implications of your suggestions?
- Identify all the users of the system, and indicate how you would expect each category to use the system. What are the implications in terms of types of communication and terminals?
- What security issues arise, and how might they be addressed?
- What are the implications of the language variations in Europe on the system; how will it affect both the servers and the communications?
- What is the impact of the need for 48 hour delivery on the communications facilities?
- What are the impacts of the transatlantic operations?

END OF PAPER