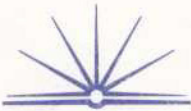


a) i) One problem with the BNF technique shown is the $\langle \text{comment} \rangle$ that has been defined. The problem is that it only allows one letter, digit, or special character to be displayed. A code comment usually consists of an explanation as to why certain sections of code appear the way they do, or ~~what~~ what a code section does. This definition for $\langle \text{comment} \rangle$ only allows one printable symbol which is hardly ~~an~~ an explanation. BNF uses recursion for repetition so this should be catered for when considering the definition of a comment.

ii) A hexadecimal number is a number with base sixteen. The numbers 0 to 9 are used, then letters A to F, then numbers 17, 18, ... as needed.

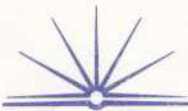
$$\langle \text{hexadecimal} \rangle ::= \langle \text{digit} \rangle \langle \text{hexadecimal} \rangle \mid \langle \text{digit} \rangle \mid$$
$$A \langle \text{hexadecimal} \rangle \mid B \langle \text{hexadecimal} \rangle \mid C \langle \text{hexadecimal} \rangle \mid D$$
$$\langle \text{hexadecimal} \rangle \mid E \langle \text{hexadecimal} \rangle \mid F \langle \text{hexadecimal} \rangle \mid A \mid B \mid C \mid D \mid$$
$$E \mid F$$



b) This system could allow ~~the~~ faster and quicker transfer and processing ~~of~~ of data, due to increased bandwidth (such as coaxial cable, fibre optic wire) and processing speed advances. Due to the use of ~~the~~ ~~to~~ Java programming, this has allowed ~~to~~ ~~to~~ efficient programs of small size with cross-platform compatibility. Also due to parallel processing and distributed computing this system could ~~create~~ make the users more ~~reliant~~ reliant on hardware and software and will be ~~subject~~ susceptible to any system

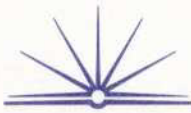


feature that many occur. It could make processing of patients data easier and quicker and so patients would have a shorter waiting time as a result, as transactions would be extremely quick to make over the networks.



c.(i) The analyst could ~~strongly~~ use a ~~questionnaire~~ questionnaire to determine the needs of the patients, and have it mailed ~~to~~ to each patient. ~~When~~ While the questionnaires are being filled out, the analyst can interview the 6 doctors, to find out exactly what ~~they~~ their needs, goals and objectives are. The ~~secretary~~ receptionist can also be interviewed, and perhaps ~~be~~ asked to draw up a sketch of an interface ~~that~~ ^{they} would like to use, or make a prototype of an interface for ~~them~~ them to evaluate.

(ii) A structured approach will provide a solid, rigorous

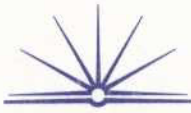


development. It would be planned thoroughly and executed in a ~~the~~ closely controlled manner. These are valuable features for a development of this size. Particularly as the system would be quite expensive and complex, linking related areas in remote regions, ~~the~~ structured approach would be quite successful in developing the new system.

A prototyping approach would not be particularly effective for developing the entire system, as it would not be feasible to trial different networks and build on them when they are spread over a great number of kilometres. However, in ~~designing~~ designing the interfaces for the system, a prototype would be valuable for gathering user feedback.

Rapid Application Development has some use in this project, particularly in the form of CASE tools. CASE tools could be used for version control, data dictionaries, test data and the production of documentation. This would speed up ~~the~~ the development process, although is of little use in setting up the network infrastructure.

End User development is of little use in the overall network



communications system as it is too complex. However, individual doctors may produce their own solutions to other problems that may arise, using a spreadsheet for example. Otherwise, it is not particularly valuable in the development of the proposed system.