

# Fact - Finding Techniques

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Fact-Finding is the formal process to collect information about the problems, requirements and goal. It is also called Information Gathering.

The following Fact-Finding Techniques are used for collection of information:

- Record Inspection
- On-site observation
- Questionnaires
- Interviews

### **Record Inspection: - Collecting facts from existing documents**

Records and reports provide valuable information about organization and operations.

Records are the collection of information and data accumulated over the time by the users about the system and its operations.

The analysts collect & review the records and reports that describe the problem.

- Records include
- written policy manuals,
- regulations,
- standard operating procedures (SOP)

used by the organization as guide.

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These documents may include:

- The companies' strategic plan.
- Formal objectives of the organization subunits being studied.
- Policy manuals that may place constraints on any proposed system.
- Standard operating procedures (SOPs), job outlines for specific day-to-day operations.
- Completed forms that represent actual transactions at various points in the processing cycle.
- Sample of manual and computerized database.
- Sample of manual and computerized screen and reports.

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Analyst also checks the documentation of previous system studies and designs performed by System analyst and consultants. The documentation may include:

- Various types of flowcharts and diagrams.
- Project Dictionaries.
- Design documentation, such as Input, Output, and Databases.
- Program Documentation.
- Computer operations manuals and training manuals.

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## **Interviews**

In interview, the analyst directly contacts system and the potential user of the proposed system. The advantage of interviews is that the analyst has a free hand and he can extract almost all the information from the concerned people but then as it is a very time consuming method. It helps the analyst to verify and validate the information gained

Interviewing is used to achieve the followings goals: find-facts, verify facts, clarify facts, get the end-user involved, and identify requirements ideas and opinion.

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### **ADVANTAGES**

- Interviews give the analyst an opportunity to motivate the interviewee to respond freely and openly to questions.
- Interviews allow the system analyst to get more feedback from the interviewee.
- Interviews give the analyst an opportunity to observe the interviewee's nonverbal communication. A good system analyst may be able to obtain information by observing the interviewee's body movement and facial expressions as well as listening to verbal replies to questions.

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### **DISVANTAGES**

- Interviewing is a very time consuming costly fact-finding approach.
- Success of interviews is highly dependent on the system analyst's human relation skills.

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## **Interview Types and Techniques**

### **Structured Interview**

Structured interviews are those where the interviewee is asked a standard set of questions in a particular order. All interviewees are asked the same set of questions.

The questions are further divided in two kinds of formats for conducting this type of interview.

**open-response format** in which the respondent is free to answer in his own words. An example of open-response is “Why are you dissatisfied with the current leave processing method?”

**closed-response format**, which limits the respondents to opt their answer from a set of already prescribed choices. An example of such a question might be "Are you satisfied with the current leave processing methods?" or "Do you think that the manual leave processing procedure be changed with some automated procedure?"

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### **Unstructured Interview**

The unstructured interviews are undertaken in a question-and-answer format. Here the respondents are free to answer in their own words. In this way their views are not restricted.

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## **Structured Vs Unstructured Interviews**

### **Structured**

Structured interview format is less time consuming and the interviewer need not be a trained person.

It is easier to evaluate objectively since answers obtained are uniform.

### **Unstructured**

In unstructured interviews the respondents are free to answer and present their views. it may happen that the interview goes in some undesired direction and the basic facts for which the interview was organized do not get relieved. So the analyst should be careful while conducting interviews.

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## **Questionnaires**

Questionnaires is a way of information gathering where the potential users of the system are given questionnaires to be filled up and returned to the analyst.

Questionnaires are useful when the analyst need to gather information from a large number of people and it is not possible to interview each individual.

Also if the time is very short, in that case also questionnaires are useful.

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**ADVANTAGES**

- Most questionnaires can be answered quickly. People can complete and return questionnaires at their convenience.
- Questionnaires provide a relatively inexpensive means for gathering data from a large number of individuals.
- Questionnaires allow individuals to maintain secrecy. Therefore, individuals are more likely to provide the real facts.
- Responses can be tabulated and analyzed quickly.

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**DISADVANTAGES**

- The number of respondents is often low.
- There is no guarantee that an individual will answer all the questions.
- Questionnaires tend to be inflexible. There is no way to explain the questions that may have been misinterpreted.
- It is not possible for the system analyst to observe and analyze the respondent's body language.
- There is no immediate way to clarify an incomplete answer to any question.
- Good questionnaires are difficult to prepare.

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**Type of questionnaires**

- Open-Response Based Questionnaires and
- Close-Response Based Questionnaires.

**Open-Response Based Questionnaires**

- The objective of open-response questionnaire is to gather information and data about the essential and critical design features of the system.
- The open-ended question requires no response direction or specific response.
- In this format, a question is asked, and the respondent write the answer in the space provided after the question.
- This form is also used to learn about the feelings, opinions, and experiences of the respondents.

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- The responses in this format may be difficult to tabulate.
- Also, the respondent's answers may not match the question asked.
- To ensure good responses in open-response questionnaire, the analyst should phrase the questions in simple sentences.
- The analyst should also ask questions that can be answered with three or fewer sentences.

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### **Closed-Response Based Questionnaires**

- In Close-Response based questionnaires, respondents have to choose from a set of given responses.
- The respondent can express their liking for the most favorable one from the possible alternatives.
- This approach is called structured approach.
- Closed-response questionnaire makes the results much easier to tabulate but the respondent cannot provide additional information that might be valuable.

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The closed questions can be of various types and the most common ones are:

- Fill-in-the-blanks.
- Yes or No type.
- Ranking scale questions ask the respondents to rank a list of items in the order of importance or preference.
- Multiple-choice questions which offer respondents few fixed alternatives to choose from.

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### **Open Vs Closed Questionnaires**

- Open form offers more flexibility and freedom to the respondents whereas the closed form is more specific in nature.
- Open-ended questionnaires are useful when it is required to explore certain situation. They also require a lot of time of the analyst for evaluation.
- Closed questionnaires are used when factual information is required. Closed questions are quick to analyze but typically most costly to prepare but they are more suitable to obtain factual and common information.

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### **On-site observation**

- In on-site observations, the analyst personally visit to the site and discovers the functioning of the system to gain first hand knowledge of the activities, operations, processes of the system on-site.
- Here an analyst is work as information seeker.
- This information is very meaningful as it is unbiased and has been directly taken by the analyst.
- This technique light on the actual happenings of the system as compared to what has already been documented, thus the analyst gets closer to the system.
- This technique is time-consuming as an analyst need to spend a lot of time on site to understand the functioning of the system.
- This method is however less effective for learning about people's perceptions, feelings and motivations.
- This technique is often used when the validity of data collected through other methods is in question or when the complexity of certain aspects of the system prevents a clear explanation by the end-users.

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**ADVANTAGES**

- Data gathered by observation can be highly reliable. Sometimes observations are conducted to check the validity of data obtained from individuals.
- Complexity tasks are sometime difficult to clearly explain in words. Through observation, the system analyst can identify task that have been inaccurately described by other Fact-Finding techniques.
- Observation is relatively inexpensive compared with other Fact-Finding techniques.

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**DISADVANTAGES**

- Because people usually feel uncomfortable when being watched. The act of observation can alter behavior.
- Some system activities may take at odd times, causing a scheduling inconvenience for the system analyst.
- If people have been performing tasks in a manner that violates standard operating procedures, they may temporarily perform their jobs correctly while analyst is observing them. In other words, people may let you see what want you to see.

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