UNIT 7 INFORMATION ANALYSIS AND CONSOLIDATION PRODUCTS

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7.0 OBJECTIVES

After reading this Unit, you will be able to:

- describe the pre-requisites for information consolidation;
- discuss the concept of information analysis and consolidation (IAC) products resulting from information consolidation activities;
- explain the need for IAC products along with their characteristics and functions;
- enumerate different types of IAC products and describe the basic processes involved in their preparation;
• determine the channels by which information consolidation products will be delivered to the clientele;

• assess the techniques and methods by which IAC products can be effectively marketed to the target audience; and

• properly evaluate IAC products and services.

7.1 INTRODUCTION

We have discussed the concept of ‘Information Analysis and Consolidation’ in the preceding units (5 and 6) of this Block. It has been emphasised that the term ‘Information Consolidation Activities’ is used to define the responsibilities exercised by individuals, departments or organisations for evaluating and compressing relevant documents in order to provide definite user groups with reliable and concise new bodies of knowledge.

Individuals or groups of individuals performing information consolidation activities would constitute an Information Consolidation Unit (ICU). User orientation and cooperation between subject specialists have been stated as fundamental requirements for the success of information consolidation. In other words, the paramount importance of users is recognised in this context. As a matter of fact, it is imperative to know the information needs and information behaviour of users and this knowledge is essential to the design of information consolidation products and services. The key to the direction and contents of all information consolidation activity are users. Therefore, the products and services should be highly user-oriented. This is the reason why the definition for consolidated information mentions prominently definite user groups to which information is to be provided. It is said that information consolidation products are determined with one eye on the user and with the other eye on the best available information on the subject. However, on the operational level, naturally the development of a product has to involve definition of processes and procedures by which the product will come into being and also of a unit that will carry out these processes. In this Unit, let us discuss briefly, a variety of possible information consolidation products based on user requirements.

7.2 DIFFERENT CATEGORIES OF INFORMATION CONSOLIDATION PRODUCTS

There are a large number of information consolidation products. The major types include the following:

• Reviews
• Reports
• Data
• Databases
• Technical Writings
• Handbooks
• Critical Studies
• Requests
It may be mentioned here that each of these products have their own requirement, criteria and procedures. For example, criteria and practices for reviews are different from those necessary for technical writings. In many instances, products also require restructuring of synthesised information.

In the following sections of this Unit let us try to know more about the following types of information consolidation products:

- Reviews and related products,
- State-of-the-art Reports,
- Handbooks,
- Statistical Reviews,
- Trend Reports, and
- Technical Digests.

### 7.3 REVIEWS AND RELATED PRODUCTS

In the spectrum of many possible information consolidation products, reviews occupy a special and most significant place. They are the examples of highest levels of intellectual re-processing of information. They are prepared by the subject specialists. In this era of information explosion, well prepared critical reviews are preferred by the researchers, particularly research scientists and technologists, over the widely scattered primary sources of information. Such reviews not only keep them abreast of the current developments in their own area of research, but also help them to have an overview of the related subject areas. The role of review in coping with the information problem also has been stressed in the international arena. One of the recommendations of the 1961 Pugwash Conference held at Stowe, Vermont, gave particular attention to this need:

“We recommend that measures be taken to bring significant work going forward in all countries to the attention of interested scientists. This objective could be served by the publication of international review journals of two types: interdisciplinary review journals written in relatively non-technical language for the benefit of scientists in different disciplines, and more specialised review journals which would keep scientists working in a given area abreast of work going on in the same or related areas all over the World”.

A number of user surveys have also revealed that there is an increasing demand for critical and carefully edited reviews. Such reviews are extensively used by scientists and technologists. For instance, Annual Reviews publications are amongst the most highly cited publications in scientific literature. “For instance out of 41 titles of Annual Reviews (published in disciplines within biomedical, life, physical and social sciences including economics), 34 titles received the ranking ranging from 1-8 in Journal Citation Report of 2011 in various disciplines. Journal Citation Report 2011 assessed 10,677 journals in 232 disciplines” (http://www.annualreviews.org/)

Therefore, the need for and the value of reviews are well established. Also, the role of reviews is well delineated. Thus, there is much to draw upon when considering reviews and reviewing including a long established tradition.
7.3.1 Definition and Meaning of Reviews

The term ‘review’ in this context may be considered as a generic concept and covers a number of closely related products and types of reviews. It is defined “as a critical synthesis of the state of knowledge in a given subject or a topic; it is a critical examination of information and literature on a subject or topic accommodated in its broader framework”. The review provides a narrative account of the progress of a particular subject field and it is prepared by an expert. By review, we mean the critical evaluative review and not just a summary or book review.

Reviews can be categorised according to their length, functions, expected readership and other characteristics. Reviews range from a short review article published in a journal or to a review monograph or a multivolume treatise in which chapters or volumes are written by different authors. A review may be a one-time or an occasional publication. It may be a periodical review published at regular or irregular intervals. Based on the intended readership, reviews may be written for subject specialists, students or general readers. Leitch categorises reviews into three general groups.

First is the periodic type, which deals with a limited subject area during a particular time interval and usually presents findings, with little or no analysis or critical evaluation. The main purpose of such a review is to inform reader of current developments in a field.

The second type is the occasional review which discusses a subject broadly and interpretively and need not cover all literature during a clearly defined period, for the author is expected to be selective and critical. The quality of such reviews varies greatly, depending on whether they deal chiefly with opinions or with findings.

The third type is the analytical or constructive review, which typically is of book length and deals with concepts or theories and findings. It is sometimes called the research review and often is undertaken to meet a specific need in an area – for example, to clarify issues and show where more information is necessary or to provide a basis for needed guidelines. It may deal with only one field or may establish or clarify relationships between fields and also affect a creative synthesis. In fact, review literature is not easy to categorise. Saracevic (1986) distinguishes two types of reviews:

i) Bibliographic type of reviews emphasising the literature-oriented or bibliographic approach. Such type of reviews evaluate the contributions in a subject or topic within a defined period of time e.g. annually.

ii) Instructional reviews have a subject-oriented approach focussing on a particular scientific or technical problem and its solution. Many reviews combine the bibliographic and instructional role into one, the proportion varying according to the aim and audience for the review.

Preparation of reviews is an arduous task. It involves collecting, reading, digesting and evaluating scattered primary literature on a given subject. Then condensing their contents and putting each significant contribution in a proper perspective relating it to the general body of knowledge. In critical reviews large portion of
primary literature on the subject is eliminated and only significant contributions with full bibliographical details are brought to the attention of the reader. Since information conveyed by reviews is evaluated, assessed and related to general body of knowledge by a third person, reviews are found to be more effective in transfer of ideas and knowledge than the individual research paper. No original research is reported in reviews. Reviews are secondary sources of information, because they are based on other publications that contain primary information.

7.3.2 Functions and Uses of Reviews

There are two types of functions and uses of reviews:

1) Historical – those which are fundamental to the development of a subject or topic.

2) Contemporary – those which are beneficial to individual users. The description of these two functions is taken from Woodward (1974).

• Historical or Subject Functions
  i) The peer evaluation of published literature: this relates to passing of judgement on what is worth saving in a literature.
  ii) Collation of information from different sources: this acts as a unifying process for a subject or a topic and provides a continuing conceptual framework in which individual works may be viewed in perspective.
  iii) The compaction of existing knowledge: this comprises of extracting the parts of the papers containing new information only, leaving out portions that pertain to verifications, discussions, methods, etc., already known or subsumed.
  iv) The replacement of primary documents as the written record: replacing many scattered documents with one.
  v) The identification of emerging specialities: by bringing together various works, the emergence of new area may well be first identified in a review.
  vi) The direction of research and work: suggestions for further work.

• Contemporary or User Functions
  i) Informed notification of the published literature: this enables individuals to concentrate on the more worthwhile papers; summary which is worth knowing; selection aids.
  ii) Current awareness of related fields: this helps individuals to keep abreast of advances in field adjacent to their own, particularly useful for learning from different subjects or topics.
  iii) Back-up for other literature searching: this serves as a starting point for searching more current materials not yet covered in reviews.
  iv) Searching for alternative techniques: this helps in resolving methodological problems in own work; providing data; reference aids.
  v) Initial orientation in a new field: this provides basic didactic and bibliographic information from which to continue work in a new subject or topic.
vi) Teaching aids: these supplement or even replace textbooks.

vii) Feedback: provides a measure of researcher’s own published works (the reviews are fairly used for this function).

viii) Inspiration: this provides suggestions and ideas for further work; stimulation for putting research into practice.

It may be mentioned that the patterns of use of reviews for various individual functions may differ significantly between various types of users. Furthermore, reviews can be specially structured and oriented to emphasise some of these functions and encourage or favour some of the uses.

7.3.3 Problems of Production

Depending on the audience to be addressed reviews may be written for specialists, students and general readers. It may be stated that the methodology for the preparation of reviews is essentially same as that followed in information analysis and consolidation. Production of reviews requires specialised subject knowledge. The selection of material to be included, its assimilation and interpretation, evaluation and finally its organisation into a meaningful and useful review article are time-consuming and arduous tasks, the responsibility for which has to rest almost entirely on the review writer. It has been observed that the research scientists, who have the ability to synthesise volumes of primary literature and prepare reviews, consider writing of reviews is less rewarding than the actual research. So they are reluctant to undertake the writing of reviews.

Various incentives, such as fellowship, sabbatical leave and prize for outstanding reviews have been suggested to make review writing attractive to the capable scientists. Keeping in view the importance of review writers and the difficulties they face, the Weinberg Report recommended that scientific and technical societies should reward their work with good pay and with the same regards that is normally bestowed on the experimental researchers. The Weinberg Report also recommended that specialised information centres should assist review authors by compiling bibliographies and making available copies of needed documents and translations.

7.3.4 Methods of Evaluating a Review

Evaluation is concerned with determination of the intrinsic merit, validity and reliability or in other words, the quality of information sources which will eventually be consolidated. Unfortunately, there are no objective criteria for measuring information quality. However, there is a general consensus as regards to what constitutes quality information. Most of the criteria that are considered for evaluation of information sources are considered appropriate in the context of evaluation of reviews also. In addition, there are a few more criteria which are meant for evaluation of reviews, stemming from the dual nature and multiple functions of reviews. The additional criteria are discussed below:

- **Completeness**: refers to the degree to which both the subject and literature on the subject were covered; the degree of insight shown.

- **Perspective**: meaning the direction, purpose, orientation, the degree of appropriateness in relation to both a given subject and for a given user group.
• **Analysis**: refers to the thoroughness, depth and breadth of analysis; degree of collation of information from different sources, degree of evaluation applied in analysis.

• **Synthesis**: means the degree of compactness-relations drawn; extent of superseding of previous information and literature, power of references; degree of drawing from related subjects; degree of evaluation applied in synthesis.

• **Value-added**: identification of emerging specialities; introduction of new hypotheses or theories, suggestions for future work (research, translation into practice, etc.).

• **Utility**: the extent to which a review serves the multiple functions and not only one or two functions.

### 7.3.5 Some Examples of Reviews

**Annual Reviews**: These are ‘critical’ or ‘state-of-the-art’ reviews published annually in book form on a broader subject, consisting of a number of review articles on its sub-disciplines written by subject experts. These are meant for specialists. For example, reviews published by Annual Reviews Inc., a leading publisher of annual reviews. The publisher publishes comprehensive critical reviews in 40 disciplines within Biomedical, Life, Physical and Social Sciences including Economics. Out of 40 titles of Annual Reviews, some of the titles are as follows: *Annual Review of Analytical Chemistry; Annual Review of Biomedical Engineering; Annual Review of Cell Developmental Biology; Annual Review of Genomics and Human Genetics; Annual Review of Law and Social Sciences.*

(http://www.annualreviews.org/)

Annual Reviews are also published by learned societies such as *Annual Review of Information Science and Technology* was published by American Society for Information Science (the ASIS has ceased to publish ARIST).

**Advances Type, Progress Type**: These are ‘critical’ and ‘state-of-the-art’ type reviews published in book form rather less frequently, such as once a year or sometimes in two to three years. Some examples are *Advances in Librarianship Vol. 1* was published in 1970 and Vol. 33 published in 2011; *Progress in Semiconductors*, etc.

**Journal Type**: Some scholarly periodicals are devoted exclusively to publish critical reviews such as *Chemical Reviews*, a quarterly periodical published by American Chemical Society.

**Popular Journal**: Popular journals contain popular review articles in a particular subject area written in simple language which an educated person who does not have knowledge of that subject can understand. For example, *Science Reporter* (Monthly) published by Council of Scientific and Industrial Research, publishes popular review articles on contemporary science topics.

**Essay Type**: These reviews are tutorial types of reviews generally meant for students, teachers and lecturers. Such reviews are not for subject specialists. For example, *Essays in Radiology* published by Academic Press.
Monograph Series or Treatise Type: These reviews are irregular series of long treatises in a particular field, often forming a definitive work or milestone in the development of a subject. For example, *Treatise on Geochemistry* (10 volumes set) and *Treatise on Geophysics* (11 volumes set) published by Elsevier. Both the publications provide a comprehensive integrated summary of present state of knowledge in their respective field of study.

Year Book Type: Such reviews are in the form of state-of-the-art reviews and are generally published in the field of medical sciences. For example, *Yearbook of Diagnostic Radiology* published by Elsevier.

Self Check Exercise

Note: i) Write your answers in the space given below.

ii) Check your answers with the answers given at the end of this Unit.

1) Explain the important functions performed by reviews.

2) Briefly discuss the specific criteria for evaluating reviews.

7.4 STATE-OF-THE-ART REPORTS

State-of-the-art reports are particular category of reviews which do not have an all-encompassing scope and historical orientation. Saracevic defines a state-of-the-art report “as a review concentrating on the most up-to-date information and literature in a given subject or topic”.

The main purpose of state-of-the-art reports is to describe a very recent situation when they reach their audience. In other words, they are timelier than traditional reviews and serve mostly as a current awareness tool. In order to achieve this currency, state-of-the-art reports are published as informal reports, prepared on demand, often oriented to a restricted clientele, sold at high prices and become obsolete quite fast.

The state-of-the-art report is used mostly in relation to technological topics and in business and commerce. In this section, let us try to discuss a few major types and know their uses.
7.4.1 State-of-the-art of a Technology

These types of reports summarise, compare and evaluate the advances, characteristics and/or utilisations of a given technology or technological products or process. They differ according to the intended use and audience. These reports generally highlight the following facets of the subjects:

- Technical and engineering aspects: They are directed towards technical personnel and engineers in particular. These reports are useful in technology design, deployment and purchase recommendations, comparison of characteristics and alternatives and keeping up-to-date with technology.

- Use aspects: They are directed towards users of technology emphasising details, characteristics, requirements and economics of use including comparative reliability, durability, etc.

- Management aspects intended towards policy makers on a higher level.

Examples:

i) On Knowledge to Information Extraction. 
   State-of-the-Art-Report
   Prepared by
   Robert Engels and Bernt Bremdal
   CognIT a.s., Asker, Norway
   July 2000

ii) Alternate Concrete Acceptance Criteria 
   State-of-the-Art
   Final Report
   Prepared by
   Paul Mueller
   John P Zaniewski
   Centre for Advanced Research in Transportation
   Nov. 1987

iii) Advanced Internet Technology – IV
    State-of-the-Art Internet Technologies
    SOI Asia Project
    2008

7.4.2 Market Reports

Custom-tailored services responsive to the specific needs of a particular group should establish their acceptability by the quality of their performance in meeting the customer’s needs. Market reports are one such category. These reports summarise the state of an industry or a market in terms of its existence, financial strength, economics, profitability, deployment, growth, characteristics, gaps, trends, potential, etc. As in technological state-of-the-art reports, these can similarly be oriented towards different uses and users. These reports are mainly useful in market decision and planning. Considerations of competition, opportunities and the like they must be prepared by experts in marketing aspects.
7.4.3 Statistical Reviews

The generation and dissemination of critically evaluated reference data are essential to the progress of science and technology. Statistical reviews present statistical correlations in a wide variety of technical, market, demographic, scientific and other areas. These essential correlations are specially composed and evaluated to show cross-dependence of trends. These statistical reports may be used for briefing of the decision makers.

Self Check Exercise

Note: i) Write your answer in the space given below.

ii) Check your answer with the answers given at the end of this Unit.

3) What do you understand by the term state-of-the-art report? When are such reports used?

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7.5 HANDBOOKS

Handbooks constitute one of the forms of review. Handbooks are very popular and have wide spread uses and markets. The appeal of the handbook is that it is a ready reference book. A handbook is a review concentrating on critical data (including chemical structures, mathematical formulae and the like) and/or guidelines for accepted and tested procedures, techniques, processes and standards. One does not necessarily read a handbook as one would read another type of review, but one consults the relevant portion at the time of need and extracts just that data or information which is needed. Production of handbooks is continuous operation in many cases. It may also be a one-time effort as in the case of UNISIST handbooks.

7.5.1 Types of Handbooks

There are many types of handbooks. Let us only concern ourselves with the major ones.

- Compilation of critical data and formulae on specific substances, processes, observations and/or phenomena type of handbooks are used mostly in science and technology for the purposes of experimentation, design calculations, construction, safety considerations, maintenance replacement, comparison, etc. It must be focussed here that critically evaluated data are essential to the progress of science and technology. Production of critically evaluated data compilations, as well as the production of reviews must be undertaken by Information Analysis Centres as an important activity. Some examples of such handbooks are: CRC Handbook of Chemistry and Physics and CRC Handbook of Thermoelectric.
• The second type of handbooks are those which contain guidelines for
accepted, tested and/or recommended procedures and processes. These are
actually aimed at doing things, for decisions related to processes and
procedures, for learning. They might be found in different forms ranging
from step-by-step pamphlets to how-to-do books and manuals, to extended
discussions of options in given processes. For example, *Handbook of Rock
Gardening on the Hills* (Edited by P.Kachroo and Priya Zarabi), Published
by Indian Council of Agricultural Research.

• The third type of handbooks are those which contain descriptions and/or
references of standards to be applied in accomplishing things actually. These
can incorporate required standards (such as those in bibliographic work).
There can be different types of handbooks containing tables, descriptions
aimed at promoting harmonisation and interconnections. For example,
*Laboratory Biosafety Manual* published by World Health Organisation;
*GRIHA Manuals* Vol.1-5 published by The (erstwhile Tata) Energy Resources
Institute (GRIHA (Green Rating for Integrated Habitat Assessment) is
national rating system of India).

**Self Check Exercise**

**Note:**

i) Write your answer in the space given below.

ii) Check your answer with the answers given at the end of this Unit.

4) Briefly describe the types of handbooks and their usefulness.

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**7.6 TREND REPORTS**

Trend reports constitute one of the important IAC products. They provide a
systematic overview of new developments taking place in any subject along
with current research trends. A trend report may also be considered a useful
documentation service. It may be stated that a trend report provides an exposition
of a subject, giving an account of general direction of research in a given subject
based on a review of the recent literature. This type of service is mainly designed
to help the specialist reader in the productive utilisation of her/his time and
conservation of research potential. The special training received by the information
professionals equips them to undertake this type of service. It may be emphasised
that subject knowledge is a necessary component for preparation of trend reports.

**7.6.1 Need for Trend Reports**

In the age of information explosion and with proliferation of documents in any
one subject, the existing documentation services like indexing and abstracting
are not adequate to meet the specific demands of specialist readers. Special efforts
in the form of value-added information services are required to satisfy such
specialised information needs. Trend reports might be considered one such
category.
**7.6.2 Preparation of Trend Reports**

The preparation of trend report on a specific subject by a documentalist is a useful form of information service. In the earlier times, trend reports used to be prepared by subject specialists, on the basis of documents accessible to them. However, development of new techniques in library and information science has enabled information specialists to undertake this responsibility. Information specialists are now in a position to view any subject in its proper perspective and track its progression and perceive the emerging trends. For this purpose, it is imperative that they possess the under mentioned qualities:

- familiarity with different components of the subject;
- knowledge of the exact subject requirements of the specialist for whom the trend report is addressed;
- know the techniques of compiling a trend report;
- they must establish proper rapport with the concerned specialist user to elicit her/his subject approach and views relating to its development;
- the information specialists involved in the preparation of trend report on a subject must be knowledgeable regarding the sources of information relating to that subject.

Equipped with the above qualities they should undertake the preparation of a trend report in a systematic manner.

Gopinath (1971) is of the opinion that the work relating to the preparation of a trend report may be conceived at three planes: i) idea plane, ii) verbal plane and iii) notation plane. The work of the idea plane comprises:

- Choice of the specific subject,
- Collection of ideas from different documents,
- Arrangement of these ideas into a helpful sequence, and
- Integrating the information obtained into an organised text.

On the other hand the work pertaining to the verbal plane involves:

- Use of homonym-free synonym-free technology, and
- Other factors associated with proper expression of ideas in a simple and yet effective language.

The third plane i.e. notation plane of this activity includes:

- Use of expressive notations for representation of the level of unity of ideas, and
- Structuring the text in a manner conceived in the idea plane.

Finally, it is essential that a trend report obtained as a final product of the procedure mentioned above will have: a) title page, b) contents page, c) brief informative abstract, d) index and e) appendix containing definitions for the technical terms used in the text of the report.
7.6.3 Some Examples of Trend Reports

   Trends in Cancer Research,

2) World Bank (2008)
   Trends in Sustainable Development:
   Agriculture, Rural Development, Land, Diversification

7.7 TECHNICAL DIGESTS

The information professionals working in libraries and information centres in general and specialist organisations, create various products and services to meet the information requirements of their clients. The information professionals have additional responsibilities in planning and devising some specialised services which might meet the specific requirements of their users in a better way. Technical digests, as information products have been created and put into use to meet the information requirements of specialists, especially in industry and management environments. Let us try to understand what technical digests are, how they are planned, designed and prepared. It may be mentioned that the layout and presentation of technical digest must be helpful to the users to enhance its utility.

7.7.1 Definition and Meaning of Technical Digests

The dictionary meaning of a digest is “a short written report, which provides the most important part of a larger piece of writing or a short written report containing recent news”. The term ‘digest’ is synonymously used with compendium and/or epitome. In other words, a digest may be defined as “Body of information or written matter, involving information consolidation by condensation. It is a compendium for information gathered from various sources, systematically and methodically arranged, classified under headings and sub-headings. It is prepared either on demand or in anticipation for quick and ready reference, with subject scope spanning from literary to science and technology”. As for Guha (1983), “digest is actually fuller representation of a document, rewritten for a purpose or to suit the requirements of different group of people, but intended to serve as complete substitute for the original document”. Digests are generally periodical publications containing condensation of works, gathered from many sources and arranged in a systematic order. A digest can be ad hoc publication prepared on request or it can be issued frequently at regular intervals in anticipation of demand. A technical digest is distinguished by the subject covered and its scope. In other words, the subject scope of a technical digest may be mainly science, technology and management aspects. Technical digests are products of condensation process.

7.7.2 Need for Technical Digests

Proliferation of scientific information and its wide spread scattering through a number of sources makes it difficult for the technical workers and people employed in industry to keep abreast of developments taking place in the field of their specialisation. Information products like technical digests help them to be aware of the latest developments taking place in the fields of their specialisation.
It must be emphasised that different categories of workers employed in different industries require digests with different contents. For instance, managerial personnel are generally interested in product-oriented information such as technical, commercial and marketing information. Technical digests incorporating with quality information will be of a great help to them in their decision making responsibility. Operators and other technical workers require information which will enable them to solve technical problems which they encounter in day-to-day work. Technical digests containing new ideas, processes may prove useful to them.

In essence, technical digests serve the following objectives:

- Keep different levels of workers in industry abreast of the developments taking place in fields of activity,
- Provide timely and reliable information relating to their fields of specialisation,
- Disseminate latest technical know-how, and
- Serve as an effective channel between research and production centres.

### 7.7.3 Categories of Technical Digests

Generally, we do not come across literature advocating specific categorisation in the preparation of technical digests. However, digests are prepared keeping in view the following levels of employees in the industry:

- Top management,
- Middle / supervisory management, and
- Operator level personnel.

It may be mentioned that the digests needs to cover the following components of information for the top management:

- Corporate management,
- Total quality aspects,
- Finance,
- Production,
- Research and Development (R&D),
- Personnel management (HRM),
- Sales,
- Public relations, and
- External regulations.

In the same way, the digest for middle management must incorporate the information of the following nature:

- Enhancing the utilisation of installed capacity,
- New production processes, techniques which can conserve the resources and maximise the production, and
- Problem solving and decision making aspects.
The digest meant for workers and operators should look to provide information which will enable them to:

- Solve day-to-day technical problems;
- Stimulate them to the processes of modernisation of existing methods and techniques of production; and
- Prepare them mentally towards mechanisation of existing tasks.

This is only a tentative categorisation which may be considered to be a guiding principle and the scope may be further broadened depending on the varying scenarios.

7.7.4 Planning and Design of Technical Digests

Systematic planning is the first step in the preparation of any value-added information product or service. The case of technical digest is no exception to this rule. Planning of technical digest involves the following steps:

- Identification of users and their information requirements;
- Sources of information to be consulted, collected and included;
- Analysis and consolidation of information; and
- Evaluation.

It must be emphasised that all these steps are essential in the preparation of any information product and are not special to the preparation of a digest and hence they are not discussed here. However, know thy user commandment is reemphasised in this context as well. Another point worth noting is that the most important sources for this purpose comprise: learned journals, newsletters, company reports and the trade sections, news sections and new product sections of journals as these aspects constitute nascent information. This, however, does not exclude other relevant information which can be culled out from any other category of sources.

7.7.5 Presentation and Layout of Technical Digests

Information consolidation has proved its effectiveness and potential for information transfer and communication. Its value-added characteristics, in different products and services, have definitely resulted in the increased use of information by different categories of users. It must be noted that the significance of information products lies not only in adhering to the four tenets: organisation, analysis, judgement and decision, but also the presentation of the material derived from these processes in a form which entices the users towards them. Therefore, careful consideration is made in the design and presentation of technical digests. The digest should not only collate, relate and link information from different sources relevant to the clientele, but also the terminology used in the digest must be such that it is intelligible to the users to whom it is addressed. Accuracy and authenticity of technical contents along with brevity, consistency and precision are qualities generally expected of a good technical digest.

Presentation

The following guidelines need to be observed for an effective presentation:

- The style of writing should be simple and user-centric;
Special Products and Services

• Accuracy of data and facts reported in the digest must be above reproach;
• Technical jargon need to be used where it is absolutely needed;
• The technical terms used in the digest need to be explained; and
• Tables, graphs and diagrams must be provided to enhance the utility of the digest.

Contents

The contents of the digest should include information on the following:

• How a new product or process is better than the ones already in existence?
• Whether any new material is used in the product. If so, how its availability for commercial use can be ensured?
• The benefits that accrue by using a new technology in terms of material, money and manpower.
• Whether the new technology envisages use of new equipment. If so, the description and availability of such equipment may be ensured.

Layout

Apart from the quality of the contents, the layout of the digest plays a very important role in its effective use. Hence, the essential points that should be observed in this regard are:

• The title of the digest should not only be appropriate vis-à-vis its contents but must be catchy;
• The digest should entice the initiator of the action i.e. the manager;
• It must focus as to how a reported idea would be more effective and emphasise its value in no uncertain terms, so that it immediately catches the imagination of the manager; and
• It is important to note that a short digest always increases the probability of its use.

Lastly, it is very important that references to sources from where the information included in the digest is culled out should be mentioned in the form of a bibliography. This certainly provides a mechanism for verification of authenticity and reliability of the information provided through the digest. For example, TIDEE-TERI Information Digest on Energy and Environment is published quarterly by TERI. Each issue contains a few articles, about 250 digests, a few news briefs and digests of websites, announcements of conferences, patents, standards, government notifications, etc. in the fields of energy, local and global environment and sustainable development. (http://www.teriin.org/)

Self Check Exercise

Note: i) Write your answers in the space given below.

ii) Check your answers with the answers given at the end of this Unit.

5) Differentiate between Trend Reports and Technical Digests.

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6) Explain the significance of design and layout in Technical Digests.

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7.8 SUMMARY

The Unit commences with the explanation of information consolidation activities and points out the fact that user orientation and cooperation between subject specialists and information specialists as a necessary pre-requisites or fundamental requirement for their successful operation. The different categories of IAC products are then mentioned. It has been emphasised that key to the direction and contents of all information consolidation activity are users and therefore, the products and services should be highly user-centric. It is said that the information consolidation products are determined with one eye on the user and with the other on the best available information on the subject.

An attempt has been made to discuss and explain to you some of the important IAC products, their need, characteristics, functions and the processes involved in the preparation of these products. The Unit also considered the evaluation of these products so that they can effectively meet the requirements of the target audience.

7.9 ANSWERS TO SELF CHECK EXERCISES

1) Reviews are a specific class of information products which are common with the services provided by information analysis centres. Reviews may be considered as a critical synthesis of the state-of-knowledge in a given subject or its sub-discipline.

In literature, we come across two kinds of functions associated with reviews:

i) Functions which are fundamental to the development of a subject. These functions are known as historical functions.

ii) The other functions are contemporary or user related functions which are useful to individual users. Reviews can be prepared to emphasise either of these functions.

By historical functions, we generally understand the following aspects:

- Critical evaluation of published literature, which indicates the significant contributions made to the development of the subject;
- Collation of the information from different sources. In fact, these types of reviews provide the conceptual framework to the subject through which the individual contributions can be viewed and evaluated;
Special Products and Services

- Compaction of existing knowledge: this category of reviews present extracts from the papers containing new ideas and information leaving out the aspects of the knowledge, we already know;

- Discerning and identification of emerging specialities. As a matter of fact, this type of review identifies the emergence of new area in a subject by consolidating various works appearing in the literature of a particular discipline.

Among the user related functions attributed to reviews, the following aspects deserve special consideration:

- These serve as informed notification of the published literature. This enables the individual user to concentrate more on worth while papers and serve as a selection aid;

- Serves as a current awareness function. This function enables users to keep abreast of advances in fields adjacent to their own field of specialisation. This helps in cross fertilisation of ideas; and

- Back-up for the literature searching. One of the user-related functions associated with reviews is that it serves as a starting point for searching more current materials not yet available in reviews.

2) Criteria for evaluating reviews arise out of their dual function namely bibliographic and instructional. In many instances reviews from various information sources are considered for use in information consolidation process. In such a situation, reviews need to be evaluated as critically as the primary literature. In addition to the general criteria applied for evaluating information sources, some additional criteria need to be considered in case of evaluation of reviews. These pertain to:

- **Completeness**: refers to the degree to which both the subject and the literature on the subject are covered and the insight shown;

- **Perspective**: this relates to purpose, direction, orientation and degree of appropriateness in relation to a given subject and for a given audience (clientele);

- **Analysis**: the thoroughness, length and breadth of analysis, degree of collation of information from different sources and degree of evaluation applied in analysis;

- **Synthesis**: degree of compaction and relations drawn, extent of suppressing previous information and literature, power of inferences, degree of drawing from related subjects and degree of evaluation applied in synthesis;

- **Value-added**: identification of emerging specialities, introduction of new hypotheses or theories, and suggestions for future work serving as inspiration and stimulus;

- **Utility**: the degree to which a review can serve multiple functions.
3) State-of-the-art reports are a type of reviews which do not have an all-embracing scope and up-to-date-ness. The main purpose of such reports is to describe a very recent situation when they reach their clientele. In other words, the state-of-the-art reports are timelier than traditional type of reviews. Recent state-of-the-art reports are often published as informal reports and prepared on demand oriented to a specific group of users. These type of reports have a tendency of becoming obsolete quite fast. These publications are generally priced.

The state-of-the-art report is used mostly in relation to technological topics and in business and commerce. These are generally of three types:

- State-of-the-art reports,
- Market reports, and
- Statistical composites.

4) A handbook is a review concentrating on critical data (including chemical structures, mathematical formulae, etc.) and/or guidelines for accepted and tested procedures, techniques, processes and standards. They are popular and widely used, particularly in science and technology. There are different types of handbooks. The major one are:

i) Compilation of critical data and formulae;

ii) Guidelines for accepted, tested and/or recommended procedures and processes. These range from step-by-step pamphlets to how-to do books and manuals; and

iii) Standards: this type may range from tables to descriptions and discussions aimed at promoting harmonisation. In most cases production of handbooks is a continuous operation.

5) Trend reports provide systematic review of recent developments in a subject field along with current research patterns taking place. The main objective of trend reports is to briefly capture the major trends of research in a specific field based on the critical analysis of literature on a subject published during a specific period of time. The period under review may vary ranging from two to five years. Trend reports are useful to decision makers and help research workers in the productive use of their time and in the conservation of their research potential.

On the other hand, a digest is a systematic condensation of a written work, often prepared by some person other than the author of the original work. Generally, it is larger than a synopsis and sometimes with headings and sub-headings to facilitate quick reference. A digest may be prepared on request on a particular subject or it may be published frequently at regular intervals or in anticipation of demand. The term digest is synonymously used with compendium and/or epitome. In other words, a digest is a compendium of information gathered from different sources, systematically and methodologically arranged, classified under headings and sub-headings. In general, the subject scope of a technical digest is scientific or technical. Technical digest preparation involves condensation process and is directed towards a specific user group. Different levels of digests are prepared keeping in view of the following levels of workers in industry: top management, middle or supervisory management and operator level personnel.
Effective communication is one of the important factors to be kept in mind while preparing a technical digest. The contents of the technical digest should be appealing, but without sacrificing the technical value of the subject in the context. The presentation of the material should be intelligible and useful and for those to whom the digest is prepared. The following guidelines need be kept in mind to chalk out a scheme for an effective presentation and layout.

- **Contents**
  i) Must specially include as to how the new product or process is better than the existing ones.
  ii) Are the materials used are entirely new or are they used in a new way?
  iii) In case new materials are used, then what about the availability for commercial use?
  iv) Does it involve new equipment? If so, is it readily available or can be fabricated locally?

- **Factors relating to layout to be kept in mind**

Layout is important for the effectiveness of the digest, in addition to the contents. Apart from other aspects, the points to be considered especially in the context of the layout are:

  i) The title should be arresting, descriptive and emphasise productivity application;
  ii) Text should be short and should not exceed 3 to 4 typed pages;
  iii) References to the sources, from which the information incorporated in the digest is culled out, should be clearly mentioned with full bibliographical details. This will help the users to consult the sources in case of need; and
  iv) Tables, graphs, etc. must be drawn clearly and positioned at appropriate places. This will increase the value and usefulness of the digest.

### 7.10 KEYWORDS

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
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<tbody>
<tr>
<td>Compendium</td>
<td>A short summary of the main points of a large work.</td>
</tr>
<tr>
<td>Digest</td>
<td>A condensation of descriptive text of information and an orderly presentation of core ideas in brief.</td>
</tr>
<tr>
<td>Epitome</td>
<td>A condensed account of any literary or scientific or technical work. It contains only the most important points of a document.</td>
</tr>
<tr>
<td>Market Reports</td>
<td>These reports generally present the state of an industry or a market in terms of its existence, financial strength, economic profitability, deployment of growth characteristics, etc.</td>
</tr>
<tr>
<td>State-of-the-art Reports</td>
<td>These are a type of reviews, which do not have an all encompassing scope and historical</td>
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Information Analysis and Consolidation Products

orientation. These present information assembled from various sources subjected to the operations of analysis, synthesis, consolidation, extraction and evaluation in a formal presentation. They emphasise recency and up-to-date ness.

**Statistical Reviews**

This class of services present statistical connections in a wide variety of technical, market, demographic, scientific and other areas. These are specially composed and evaluated to show cross-dependence of trends. These are used for briefing of the decision makers.

**Technical Digest**

A digest service directed to enable executives, engineers, technical workers, etc. working in industries. It aims to provide up-to-date information.

**Trend Report**

It gives an account of the general direction of research in the subject based on the review of the literature on current developments in a subject.

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## 7.11 REFERENCES AND FURTHER READING


