4.1 The Genesis

The idea of consortium-based subscription came late in India. Hardly any useful step was taken earlier in this direction. It is praiseworthy that IITs took the initiatives. On December 1-2, 2000, Delhi IIT organised a “National Seminar on Knowledge Networking in Engineering and Technology Education and Research” where the proposal for consortium-based subscription to e-resources was brought and discussed at length. The seminar was sponsored by the Ministry of Human Resources Development (MHRD) under the aegis of Knowledge Networking Initiatives. Dr. Jagdish Arora was its co-ordinator and more than 150 delegates from engineering and technological institutions of various parts of India participated in the discussion. One of the working groups set up at the seminar prepared a preliminary proposal for consortium based subscription to e-resources and circulated it to all IITs, IISc and NITs (formerly RECs). Based on the feedback from these institutions and also from other stakeholders, a draft proposal was prepared for onward implementation. MHRD formed an expert group in April 2002 due to the importance of the subject and clamour from the academicians and researchers. The group was headed by Prof. N. Balakrishan from IISC, Bangalore. It discussed elaborately the issue of “Consortium-based subscription to electronic resources for technical education system in India” with the publishers and aggregators. The group succeeded in developing a model for execution of the consortium\(^1\).

Finally, the expert committee submitted its report in September 2002, and consequently the “Indian National Digital Library in Engineering Sciences and Technology (INDEST) Consortium” was set-up in 2003 by the Ministry of Human Resource Development (MHRD).

A pictorial representation of building of digital collection in INDEST is shown in the Fig. 4.1.
The purpose of this consortium is to ensure that each and every institution can have maximum access to e-resources within its limited budget. In order to monitor activities, Dr. Jagdish Arora was chosen as the first National Co-ordinator and IIT Delhi was marked as the Consortium Headquarter. Thirty-eight centrally-funded government institutions including IITs, IISc Bangalore, NITs, IIMs, IIMs, NITTRs were designated as the core members of the Consortium. The fund required for subscription to e-resources was provided by MHRD which was channelled through the Consortium Headquarter based at IIT Delhi.

In December 2005, the INDEST Consortium was renamed as INDEST-AICTE Consortium which has been entrusted with the responsibility of spreading the access to e-resources to all the affiliated engineering colleges and technological institutions at much lower rates of subscription.

4.2 Current Status

The INDEST-AICTE Consortium—the biggest one in terms of the number of member institutions in Asia—provides access to more than 12000 peer reviewed electronic journals from 29 full-text electronic resources (e-resources) and 6 bibliographic databases in various disciplines. The benefits of consortium-based subscription to e-resources are reaped by all other educational institutions in addition to centrally-funded technological institutions because of its open-ended proposition. With financial support from AICTE, sixty government and government-aided engineering...
colleges get access to selected e-resources. Besides, other institutions are encouraged to join the consortium on its own in order to share the benefits in terms of highly discounted rates of subscription and better terms of agreement with the publishers and aggregators. Till March 2011, 1137 engineering colleges and institutions joined the consortium under Self-supported category. The INDEST-AICTE consortium is itself a member of International Coalition of Library Consortia (ICOLC).

The number of member institutions in the consortium has increased to 1259 till March 2012. Because of the collective strength of the number of institutions, the consortium could extract best possible prices and terms of agreement from the publishers and aggregators. The INDEST-AICTE Consortium hosts a search interface to enable member institutions to locate journals subscribed by the Consortium, their URLs and details of other member institutions. The list of e-resources available through the consortium is given in Table 4.1.

Table 4.1
E-Resources Subscribed under INDEST-AICTE Consortium

<table>
<thead>
<tr>
<th>S.No</th>
<th>E-Resources</th>
<th>URL</th>
<th>No. of Journals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ABI / Inform Complete</td>
<td><a href="http://www.il.ProQuest.com">http://www.il.ProQuest.com</a></td>
<td>4975</td>
</tr>
<tr>
<td>2</td>
<td>ACM Digital Library</td>
<td><a href="http://portal.acm.org/portal.cf">http://portal.acm.org/portal.cf</a></td>
<td>44</td>
</tr>
<tr>
<td>3</td>
<td>ASCE Journals</td>
<td><a href="http://scitation.aip.org/">http://scitation.aip.org/</a></td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>ASME Journals (+A M R)</td>
<td><a href="http://scitation.aip.org/">http://scitation.aip.org/</a></td>
<td>22</td>
</tr>
<tr>
<td>5</td>
<td>ASTM Standards &amp; Digital Library</td>
<td><a href="http://enterprise.astm.org">http://enterprise.astm.org</a> Stand</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="http://journalsip.astm.org">http://journalsip.astm.org</a> Journ</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>el: <a href="http://journalsip.astm.org/">http://journalsip.astm.org/</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="http://enterprise.astm.org">http://enterprise.astm.org</a></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Emerald Management Xtra</td>
<td><a href="http://www.emeraldinsight.co">http://www.emeraldinsight.co</a>  m/</td>
<td>125</td>
</tr>
<tr>
<td>7</td>
<td>EBSCO ’s Business Sources Premier</td>
<td><a href="http://search.epnet.com/">http://search.epnet.com/</a></td>
<td>10532</td>
</tr>
<tr>
<td>8</td>
<td>IEL Online</td>
<td><a href="http://ieeexplore.ieee.org/">http://ieeexplore.ieee.org/</a></td>
<td>241</td>
</tr>
<tr>
<td>9</td>
<td>Indian Standards</td>
<td><a href="http://www.nature.com/">http://www.nature.com/</a></td>
<td>217</td>
</tr>
<tr>
<td>10</td>
<td>Nature</td>
<td><a href="http://www.il.ProQuest.com/pq">http://www.il.ProQuest.com/pq</a> dauto</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>ProQuest Science</td>
<td><a href="http://www.il.ProQuest.com/pq">http://www.il.ProQuest.com/pq</a> dauto</td>
<td>622</td>
</tr>
<tr>
<td>12</td>
<td>Elsevier’s Science Direct</td>
<td><a href="http://www.sciencedirect.com/">http://www.sciencedirect.com/</a></td>
<td>2149</td>
</tr>
<tr>
<td>13</td>
<td>Springer Link</td>
<td><a href="http://www.springerlink.com/">http://www.springerlink.com/</a></td>
<td>1059</td>
</tr>
</tbody>
</table>
INDEST-AICTE Consortium: An Overview

### 4.3 Objectives of INDEST-AICTE Consortium

The main objective of the INDEST-AICTE Consortium is to facilitate access to qualitative international electronic resources including citations, abstracts and full-text and bibliographic databases for member institutions at much lower rates of subscription. The key objectives of the INDEST-AICTE Consortium are listed below:

- To subscribe electronic resources at highly discounted rates of subscription coupled with most favourable terms of agreement.
- To include other engineering and technological institutions apart from the core members for sharing the benefits of consortia-based subscription.
- To provide support and impart training to the users including librarians of the member institutions on subscribed electronic resources in order to maximize the usage of electronic resources.
- To explore ways of more cooperation and interaction amongst member institutions.
- To promote scientific productivity of consortium members in terms of quality and quantity of publications.
4.4 Major Activities of the INDEST-AICTE Consortium

The major activities of the INDEST-AICTE Consortium are:

- To identify current electronic resources.
- To arrange subscription from member institutions for identified electronic resources.
- To enable member libraries to access to subscribed e-resources as per their subscription.
- To ensure optimal utilization of subscribed electronic resources through interaction with member institutions.
- To arrange training programmes for the member institutions on proper use of e-resources.
- To encourage interaction amongst member institutions.
- To initiate additional activities complementary to the present activities of the Consortium.

4.5 Role of the INDEST-AICTE Consortium

The INDEST-AICTE Consortium plays the following roles:

- Builds up a coordination structure for organizational, technological and educational issues and developments.
- Floats organizational concept defining special interest and working groups in which representatives from institutions can participate.
- Organizes workshops/seminars/training programmes to discuss and solve particular problems.
- Promotes cooperation with other Indian initiative like “Vidyamidhi” and international initiatives like NDLTD.

4.6 Membership

The INDEST-AICTE Consortium has three different types of members, namely, Core members, AICTE-supported members and Self-supported members. Number of members in the Consortium has increased from 115 in 2003 to 1259 in 2011.
4.6.1 Core Members

62 centrally-funded Government institutions including IITs, IISc, NITs, IISERs, IIMs, NITTTRs, IIITs are core members of the Consortium since its inception. The funds required for providing differential access to electronic resources for core members granted by the MHRD are routed through the Consortium Headquarters. Few more centrally-funded institutions have been incorporated by the consortium as its core members to extend differential access to electronic resources to them, based on their resource requirements and specializations. The Consortium is now in the process of including eight new IITs and three new NITs and IIMs as its core members. Core members of the Consortium are divided in five groups (GI-V). The details are given in Table 4.3.

It is clear from Table 4.3 that Group I comprises of 8 institutions including IITs and IISc Bangalore; Group II 21 institutions including NITs, Indian School of Mines (ISM), Sant Longowal Institute of Engineering and Technology (SLIET), and North Regional Institute of Science and Technology (NERIST); Group III 16 institutions including Indian Institutes of Science Education and Research (IISERs), New IITs and New NITs; and Group IV 4 institutions including National Institutes of Technical Teachers’ Training & Research (NITTTR) and National Institutes of Foundry and Forge Technology (NIFFT). Further, as per Table 4.2, Core member institutions of the Consortium have grown from 37 in 2003 to 62 in 2011 due to addition of new IITs, NITs, and IIMs. An endeavour is always made to include all the centrally funded technical institutions in INDEST-AICTE Consortium.

4.6.2 AICTE-supported Members

From March 2003 onwards, All India Council for Technical Education (AICTE) provides financial assistance to the INDEST-AICT Consortium for subscription to electronic resources to 60 Government and Government-aided engineering colleges. These include 37 engineering and technology colleges and 23 universities running programmes in engineering and technology. All 60 institutions offer postgraduate courses in engineering and technology. Institutions supported by the AICTE are permitted to have differential access to only one to four e-resources, namely IEL
Online, ASME Online Journals, ASCE Online Journals, and ProQuest Science depending on courses offered by these at postgraduate level.

4.6.3 Self-supported Member Institutions

The consortium, being an open-ended proposition, also motivates AICTE-approved and UGC-affiliated institutions to join hands with the leading Engineering and Technological Institutions in the country and share the benefits of the Consortium in terms of lower subscription rates and better terms of agreement with the publishers. Prior to the consortium a lot of institutions were not in a position to afford through their own negotiation the subscription for such high quality electronic resources. The Consortium brought a sea change in the entire technical education of the country. It has become easy even for small engineering colleges to include electronic resources in their collection. 1137 institutions comprising of engineering and technological colleges, management colleges, pharmacy colleges, and government autonomous institutions have joined the Consortium under its self-supported category thereby enhancing the number of institutions under this category from 17 in 2003 to 1137 in 2011. Growth in number of member institutions in different categories of Consortium from 2003 to 2011 is given in Table 4.2. The INDEST-AICTE Consortium website maintains a searchable database of its members and resources accessible to them with a browser interface.

<table>
<thead>
<tr>
<th>Category</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Members</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>42</td>
<td>48</td>
<td>48</td>
<td>62</td>
</tr>
<tr>
<td>AICTE-supported Members</td>
<td>60</td>
<td>64</td>
<td>63</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Self-supported Members</td>
<td>17</td>
<td>50</td>
<td>75</td>
<td>492</td>
<td>530</td>
<td>690</td>
<td>820</td>
<td>1099</td>
<td>1137</td>
</tr>
<tr>
<td>Category</td>
<td>115</td>
<td>152</td>
<td>176</td>
<td>590</td>
<td>628</td>
<td>792</td>
<td>928</td>
<td>1207</td>
<td>1259</td>
</tr>
</tbody>
</table>
### Table 4.3
Groups and the Member Strength of the INDEST-AICTE Consortium

<table>
<thead>
<tr>
<th>Core Member Institutions</th>
<th>Group Type</th>
<th>No. of Member Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>IITs and IISc</td>
<td>Group-I</td>
<td>G-I</td>
</tr>
<tr>
<td>NITs</td>
<td>Group-II</td>
<td>G-IIA</td>
</tr>
<tr>
<td>ISM, SLIET and NERIST</td>
<td></td>
<td>G-IIIB</td>
</tr>
<tr>
<td>IISERs</td>
<td>Group-III</td>
<td>G-III A</td>
</tr>
<tr>
<td>New IITs</td>
<td></td>
<td>G-IIIB</td>
</tr>
<tr>
<td>New NITs</td>
<td></td>
<td>G-IIIC</td>
</tr>
<tr>
<td>IIMs</td>
<td>Group-IV</td>
<td>G-IVA</td>
</tr>
<tr>
<td>IIITs and NITIE</td>
<td></td>
<td>G-IVB</td>
</tr>
<tr>
<td>New IIMs</td>
<td></td>
<td>G-IVC</td>
</tr>
<tr>
<td>NITTTRs and NIFFT</td>
<td>Group-V</td>
<td>G-V</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AICTE-Supported Member Institutions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Supported Member Institutions</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Fig.4.2 Growth in the Number of Self-supported Members of Consortium from 2003 to 2011**
Table 4.2 and Fig. 4.2 show the year-wise growth in the number of self-supported member institutions. Before joining of AICTE, the number was only 17 and it increased to 492 (556%) in 2006. The AICTE joined hands with ‘INDEST Consortium’ in 2005 as a result of which ‘INDEST Consortium’ was born. A huge leap in the number of memberships took place from 2006 onwards⁵.

In the year 2012, the AICTE recommended the mandatory subscription of electronic databases and the AICTE negotiated the price of these databases with various publishers and vendors. Then the colleges were asked to subscribe the e-resources directly from the publisher thereby stopping the service of the consortium to a large majority of the Self Supported Members. Since 2012, the number of Self Supported Membership has fallen to 116 from 1137 in 2011⁶.

4.7 Governance

Managing the short and long term activities of the Consortium calls for a sound governance structure is essential. Alema and Antwi suggest that participating libraries should be bound by rules and regulations, and that they should enter into a formal signed agreement prior to joining a consortium. They further suggest that the governing body be authorised to make and review the policies of a Consortium⁷. The Consortium operation is guided by a National Steering Committee consisting of members amongst beneficiary institutions under the Chairmanship of the Director, IIT Delhi and the Chairman, AICTE as its Co-Chair. A National Review Committee has also been set-up under the Chairmanship of Joint Secretary (Technical Education) with an overall responsibility for making policies, monitoring the progress, coordinating with UGC and AICTE for promoting the activities of the Consortium.

Since the inception of the consortium, Dr. Jagdish Arora was the National Coordinator and continued in this role up to August 2007. Prof. G.P. Agarwal took charge as National Coordinator of the consortium from Dr. Arora and served this post for five years from September 2007 to August 2012. Since September 1, 2012, Prof. B.D. Gupta has taken charge as the National Coordinator⁸.
4.8 Services and Activities

The INDEST-AICTE Consortium not only renders assistance in the purchase of electronic resources but also carries out several other activities in order to make optimal use of electronic resources. Some of the important services and activities that Consortium has initiated are:

4.8.1 Selection of Electronic Resources

Selection of the electronic resources subscribed by the INDEST-AICTE Consortium are based on the following criteria:

- Well-established multi-disciplinary resources with broad coverage are preferable to highly specialized sources meant for specialists.
- The electronic resources already subscribed by the beneficiary institutions are preferred over those which are not being used in any of the beneficiary institutions.
- Resources that are 'electronic-only' are preferred over those that are print-based unless completely unavoidable.
- Resources that are very important but highly cost-intensive are preferred over those which are less important or less-used but of low cost.
- Resources where electronic versions are made available free on subscription to their print versions are avoided as far as possible.

The Expert Group appointed by the Ministry initially selected and evaluated the e-resources being subscribed by the Consortium. Then electronic resources are added and some of them are removed based on the demands from the member institutions after due evaluation and approval by the National Steering Committee.

4.8.2 Resource Sharing

As INDEST-AICTE Consortium did not subscribe to all e-resources for all its members the document delivery and inter-library loan (ILL) governed the success of the Consortium. The J-Gate Custom Content for Consortium (JCCC), designed especially for the Consortium, provided content-level access to all the electronic journals subscribed by all 14 institutions including IITs, IISc., and IIMs and by the institutions individually starting from 2003 up to the year 2011. The Consortium has
been looking for a centralized product in order to create a union catalogue of all the consortia run by Government of India. The Consortium is in contact with other consortia like NKRC, UGC-INFONET Digital Library Consortium etc. to have a common document delivery from 2013 onward.

4.8.3 Promoting Use of E-Resources

Several steps were taken by the Consortium to ensure utilization of e-resources in all member institutes so that the amount of money spent for the e-resources could be justified. Each year various committees of the Consortium study the usage statistics before taking decisions. For this purpose, the consortium continuously monitors the usage of e-resources. It maintains a separate, dedicated website (http://panit.iitd.ac.in/indest and http://indest.iitd.ac.in) and a template web page for all member institutions. Besides, training programmes and annual meets, posters, brochures and user manuals both at institutional and consortium levels were prepared and distributed amongst the member institutions. Moreover, soft copies of these tutorials have also been made available through the INDEST website which also provides detailed information about the Consortium regarding (i) search and browse interface for more than 12,000 journals and six databases covered under the Consortium; (ii) list of registered member institutions with search interface to find detailed member institutions and e-resources accessible to each one of them; (iii) E-Resources Access Management System (E-RAMS) designed to provide access to usage statistics to member Institutions and also to monitor their complaints; (iv) web-based online tutorials available for each resource; (v) licensing and fair use of e-resources; (vi) Self-supported membership programmes and information on how to join the Consortium; and (vii) other guidelines for members of the INDEST-AICTE Consortium.

4.8.4 Usage Monitoring

Understandably no resources can be subscribed if the usage of the same is not substantial. Hence the Consortium has made provision to access the usage statistics through web-based interfaces from publishers’ website. Most publishers maintain detailed usage statistics for e-resources offered by them to the INDEST-AICTE Consortium. Comparative usage statistics from various publishers’ websites are
downloaded at regular intervals and made accessible to the member institutions on the INDEST website through an interface called e-RAMS (Electronic Resource Access Management System) especially developed to provide and deliver statistics of usage to member institutions. It also facilitates member institutions to view IP ranges communicated to the publishers for accessing e-resources. The Consortium urges the members to utilize the e-resources in case of poor usage by them.

4.8.5 Users Awareness Training Programmes

Users Awareness Training Programmes are a crucial requirement that a consortium has to fulfil to facilitate optimum use of subscribed e-resources. Training programmes act as a tool for better communication amongst members of Consortium and solution to common problems. Such programmes are essential for both the users as well as the library staff. These enable the users to conduct their own searches more effectively. “On the job” training programmes are preferable because not only do they benefit a large number of users but also the experts available at the time of imparting training may solve localised technological problems. Imparting training to members of the INDEST-AICTE Consortium is a decentralised activity. All IITs, NITs and IIMs may conduct training programmes in their respective regions with financial support from the Consortium. Moreover, all member institutions of Consortium are also urged to conduct user awareness training programmes in their respective institutions for the benefit of their users. The Consortium has signed a tripartite agreement with the publishers of e-resources and with a local vendor as third party responsible for providing training on resources at campuses of various member institutions. All member institutions have been implored to take benefit of this arrangement and conduct training programmes on various resources within their institutions to promote usage of e-resources.

In addition to training of users, annual meets are organized by the Consortium as a platform to discuss and deliberate on various issues related to effective use of e-resources.

4.8.6 License Agreement and Fair Use

Copyright is manifested in terms of licenses in digital environment. The Consortium signs license agreement with the publisher on behalf of its member institutions. The terms of licenses for digital collection depend on conditions, variety of pricing
models and access limitations. Although the license agreement is prepared by the publisher, care is taken to incorporate terms and conditions for as many publishers as possible.

4.8.6 NLIST: The Joint Project of INDEST-AICTE Consortium & UGC-INFONET Digital Library Consortium

The Programme of subscription to e-resources through Centrally Sponsored Scheme of National Mission on Education through Information and Communication Technology (NME-ICT) of Ministry of Human Resource Development (MHRD) was being jointly executed by the INDEST-AICTE Consortium, IIT Delhi and UGC-INFONET Centre (NME-ICT/N-LIST) and provided for:

- Cross subscription to e-resources subscribed by the two Consortia, i.e. subscription to INDEST-AICTE Consortium resources for universities and UGC-INFONET resources for INDEST-AICTE Members; and
- Access to selected e-resources to colleges.

Once the consortium takes its own shape after incorporating the structure, the model would look like shown below.
4.9 References


4.10 Website visited
