

## Laboratory Information System

Written by Dr. Hazem El-Oraby

Saturday, 22 December 2007 22:09 - Last Updated Tuesday, 28 October 2008 01:00

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The module is required to be fully integrated with the hospital information system and to include control on laboratory workflow from requisition and specimen collection and processing to results reporting. This includes the services, chemistry, microbiology, blood bank etc. The linking of the hospital information system with special laboratory equipment is required. The Laboratory Modules should manage the bulk of the administrative tasks involved in the Hospital. The system should enable laboratories throughout the Hospital to streamline the processing flow of patients' specimens, flag abnormal test results, display result trends and monitor quality control. Workloads statistics are needed to measure the work effort required to perform tests.

The following has been extracted from a recent RFP. I've included it here for your reference. It may prove useful for anyone preparing such a document.

Please feel free to comment on this list, and propose any items that you think should have been included in this list.

<p><b>Laboratory Modules</b></p> <p>The module is required to be fully integrated with the hospital information system and to include control on laboratory workflow from requisition and specimen collection and processing to results reporting. This includes the services, chemistry, microbiology, blood bank etc. The linking of the hospital information system with special laboratory equipment is required. The Laboratory Modules should manage the bulk of the administrative tasks involved in the Hospital. The system should enable laboratories throughout the Hospital to streamline the processing flow of patients' specimens, flag abnormal test results, display result trends and monitor quality control. Workloads statistics are needed to measure the work effort required to perform tests.</p> <p>The laboratory modules should consist of Phlebotomist collection, Chemical Pathology, Hematology, and Histology, Blood Bank and Donor Management, Microbiology and Serology.</p>	<p><b>Description</b></p> <p>The module is required to be fully integrated with the hospital information system and to include control on laboratory workflow from requisition and specimen collection and processing to results reporting. This includes the services, chemistry, microbiology, blood bank etc. The linking of the hospital information system with special laboratory equipment is required. The Laboratory Modules should manage the bulk of the administrative tasks involved in the Hospital. The system should enable laboratories throughout the Hospital to streamline the processing flow of patients' specimens, flag abnormal test results, display result trends and monitor quality control. Workloads statistics are needed to measure the work effort required to perform tests.</p> <p>The laboratory modules should consist of Phlebotomist collection, Chemical Pathology, Hematology, and Histology, Blood Bank and Donor Management, Microbiology and Serology.</p> <p>The Laboratory Module should have Hospital defined rules based logic capabilities, to assist in establishing, performing and maintaining laboratory policies and procedures (ex: Order rules, site and workload rules, worksheet rules to streamline tasks, reflex rules for specimen tracking, interpretive resulting rules, charge rules, purge rules, reporting rules, calculation rules).</p> <p><b>1</b></p> <p>Phlebotomist collection</p>
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color="#000000">Automatic generation of collection lists, specimen labels, and
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worksheets

<b>22</b>		User defined specimen labels
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<b>23</b>		Bar-coding support
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<b>24</b>		Produce work-lists for tests requested and specimens received in labs
-----------	--	---

<b>25</b>		Wok lists production and rearrangement by work station
-----------	--	--

<b>26</b>		Transfer from one work-list to another
-----------	--	--

<b>27</b>		Sensitive archiving facilities
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<b>28</b>		Instant comparison and statistical analysis of test results
-----------	--	---

<b>29</b>		Integrated inventory management and maintenance scheduling for laboratory instruments
-----------	--	---

<b>30</b>		Reference lab routines to accommodate individual client needs
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<b>31</b>		
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Advanced telecommunications capabilities using system modems, network printers, and fax machines

<b>32</b>		Storage and retrieval of historical patient data
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Multiple functions access for multiple patients and specimens from one screen

<b>&gt;&gt;&gt; Requisition Entry</b>
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<b>34</b>		Capability to establish sources, order tests and assign collection categories with requisition entry routines
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<b>35</b>		Assign alpha / numeric test codes with profiles definition
-----------	--	--

<b>36</b>		Decentralized log-in at any workstation
-----------	--	---

<b>37</b>		Effective date ordering , with duplicate order checking
-----------	--	---

<b>38</b>		Facility to place orders from various sites on the network
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<b>39</b>		User-definable reflex testing
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<b>40</b>		
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color="#000000">Work Lists are needed to be used as load lists for automated analyzers or  
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color="#000000">Possibility for Hospital staff to review a patient's test results and specimens on-line</font></td> </tr> </table> </div> <font color="#000000"> </font><div align="center"> <table border="0" width="90%"> <tr> <td width="5%" align="left" valign="top"><font color="#000000"><strong>93</strong></font></td> <td width="2%"><font color="#000000">◆</font></td> <td width="93%" align="justify" valign="top"><font color="#000000">Real-time, on-line inquiry by patient name, billing number, medical record number or partial name look-up, specimen number and laboratory test</font></td> </tr> </table> </div> <font color="#000000"> </font><div align="center"> <table border="0" width="90%"> <tr> <td width="5%" align="left" valign="top"><font color="#000000"><strong>94</strong></font></td> <td width="2%"><font color="#000000">◆</font></td> <td width="93%" align="justify" valign="top"><font color="#000000">◆process Analyzer◆ routines which may be exited at any point in the resulting process</font></td> </tr> </table> </div> <font color="#000000"> <br /> </font><div align="center"><font color="#000000"> <table border="0" width="100%"> <tr> <td width="100%" valign="top"><a name="sect73" title="sect73"><strong> >>> Reports</strong></td> </tr> <tr> <td width="100%" align="justify" valign="top">◆</td> </tr> </table> </font></div> <font color="#000000"> </font><div align="center"> <table border="0" width="90%"> <tr> <td width="5%" align="left" valign="top"><font color="#000000"><strong>95</strong></font></td> <td width="2%"><font color="#000000">◆</font></td> <td width="93%" align="justify" valign="top"><font color="#000000">Patient reports provide nurses and physicians patients◆ test results and cumulative summaries</font></td> </tr> </table> </div> <font color="#000000"> </font><div align="center"> <table border="0" width="90%"> <tr> <td width="5%" align="left" valign="top"><font color="#000000"><strong>96</strong></font></td> <td width="2%"><font color="#000000">◆</font></td> <td width="93%" align="justify" valign="top"><font color="#000000">Activity reports by Doctor, patient, or location</font></td> </tr> </table> </div> <font color="#000000"> </font><div align="center"> <table border="0" width="90%"> <tr> <td width="5%" align="left" valign="top"><font color="#000000"><strong>97</strong></font></td> <td width="2%"><font color="#000000">◆</font></td> <td width="93%" align="justify" valign="top"><font color="#000000">Patient reports by collection data</font></td> </tr> </table> </div> <font color="#000000"> </font><div align="center"> <table border="0" width="90%"> <tr> <td width="5%" align="left" valign="top"><font color="#000000"><strong>98</strong></font></td> <td width="2%"><font color="#000000">◆</font></td> <td width="93%" align="justify" valign="top"><font color="#000000">Cumulative summaries by location and patient</font></td> </tr> </table> </div> <font color="#000000"> </font><div align="center"> <table border="0" width="90%"> <tr> <td width="5%" align="left" valign="top"><font color="#000000"><strong>99</strong></font></td> <td width="2%"><font color="#000000">◆</font></td> <td width="93%" align="justify" valign="top"><font color="#000000">Discharge summaries</font></td> </tr> </table> </div> <font color="#000000"> </font><div align="center"> <table border="0" width="90%"> <tr> <td width="5%" align="left" valign="top"><font color="#000000"><strong>100</strong></font></td> <td width="2%"><font color="#000000">◆</font></td> <td width="93%" align="justify" valign="top"><font color="#000000">Summary by Medical Record Number</font></td> </tr> </table> </div> <font color="#000000"> </font><div align="center"> <table border="0" width="90%"> <tr> <td width="5%" align="left" valign="top"><font

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