A primary obligation of any health care provider is to do no harm. The same can be said for information systems. Yet many anatomic pathology information system features, add-ons, and interfaces that reduce errors are, for various reasons, not being used widely.

In CAP TODAY's annual lineup of anatomic pathology information systems, pages 22–40, vendors were asked if they offer such features as an interface to an automatic cassette labeler or other "innovative peripherals."

We were delighted to see that some vendors now provide a direct connection to automatic slide etchers and cassette labeler equipment. We urge all vendors to offer this capability. We likewise urge histology laboratories to budget for, and implement, these labeling devices.

Errors are inherent in any system that relies on handwritten identification numbers, and most laboratories still label by hand their tissue cassettes. Even the most comprehensive checks cannot eliminate the errors that result from this manual process. Yet many laboratories are not taking steps to install equipment that can eliminate this type of error, such as slide etchers and automatic cassette labelers for histology. Laboratory managers should contact their anatomic pathology system vendors and request that automatic slide etchers and cassette labelers be connected to their systems.

Another add-on that has much to offer is the LOINC (Logical Observation Identifiers, Names and Codes) test identification dictionary, which is available at no charge. Even though many systems include an indexed field for storage of the code, many vendors still do not ship the dictionary with their products. This may be because users have been slow to recognize the importance of unambiguous result identification in communicating results to other systems. While this add-on is more pertinent to clinical laboratory systems, which may have several thousand distinct result codes, it is becoming increasingly more relevant to anatomic pathology as this field evolves to include more specific antigenic and genetic testing. Such testing results will be transmitted more accurately to other systems using LOINC.

On the marketing front, of note in this year’s survey is the acquisition of two popular AP vendors—Dynamic Healthcare Technologies and Tamtron. Cerner has acquired DHT and now offers DHT’s CoPathPlus along with its widely installed AP system offerings on its Classic and Millennium integrated platforms. It will be interesting to see how Cerner integrates CoPathPlus into its broader product strategy.

Tamtron, on the other hand, has been acquired by Impath, which has been primarily a service company in the anatomic pathology segment. We expect that PowerPath and other Tamtron products will strengthen Impath’s clinical service line.

Even with these recent acquisitions, there has been remarkable stability in the community of vendors supplying anatomic pathology systems. Cerner, Computer Trust Corp., Cortex, Meditech, Pathology Computer Systems (Anatrol), Psyche (System Analysis Corp.), SCC Soft Computer, Small Business Computers of New England, Sunquest (e-Suite), and Tamtron have been featured in CAP TODAY’s AP systems surveys for at least a decade. Other vendors, including Opus, PathLogix, and Triple G, have been featured for several years.

New to this year’s AP survey are CCA, a long-standing vendor of clinical lab systems, and Netbooth.

Also worthy of mention are the two systems in the survey developed by pathologists for their own practices and offered to others at minimal or no cost—EasyPath (EasyPath Software) and Integrity (William Shang, MD.).

The information supplied in this year’s AP systems survey is based on vendors’ responses to a questionnaire. We urge readers to verify the functionality and reliability of any system they are considering and the quality of the vendor’s customer support by speaking with users of the system. We have long maintained that you are far better off choosing an adequate but limited system with outstanding customer support than a full-featured system with little support.

Dr. Aller is based in Vista, Calif., and can be reached at raller@earthlink.net.
## Anatomic pathology computer systems

### Part 1 of 11

See accompanying article on page 20

<table>
<thead>
<tr>
<th>Name of system</th>
<th>PathNet Anatomic Pathology</th>
</tr>
</thead>
<tbody>
<tr>
<td>CyberPath</td>
<td></td>
</tr>
</tbody>
</table>

First US install/first AP system install/reset recent AP system install.

<table>
<thead>
<tr>
<th>No. of contracts for sites operating AP system (H/L/C or DP/RI/GS)*</th>
<th>2001/2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of sites where system is operational</td>
<td>13</td>
</tr>
<tr>
<td>No. of installations underway but not yet live</td>
<td>4</td>
</tr>
<tr>
<td>Percentage of installations stand-alone</td>
<td>0%</td>
</tr>
<tr>
<td>Staff to develop/install-support other**</td>
<td></td>
</tr>
<tr>
<td>In entire company</td>
<td>12-4-13-38</td>
</tr>
<tr>
<td>In US division (including AP) in AP systems only</td>
<td>6-4-13-38/2-4-13-38</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No. of workstations/terminals in sites operating system (min.–max.)</th>
<th>2-250</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range in No. of surgical pathology cases per year in sites operating system</td>
<td>3,000-200,000</td>
</tr>
<tr>
<td>Range in No. of gynecologic cytology cases per year in sites operating system</td>
<td>1,000-10,000</td>
</tr>
</tbody>
</table>

Central hardware

<table>
<thead>
<tr>
<th>Terminals/workstations</th>
<th>Compaq, IBM RS/6000, HP 9000 series</th>
</tr>
</thead>
<tbody>
<tr>
<td>Programming language(s)</td>
<td>Microfiche COBOL, Dialog C, Visual Basic</td>
</tr>
<tr>
<td>Databases and tools used</td>
<td>OBJC-compliant</td>
</tr>
<tr>
<td>Operating system</td>
<td>SCO Unix, AIX, HP-UX</td>
</tr>
</tbody>
</table>

### Features

- Surgical pathology information system
- Cytology information system
- Autopsy information system
- Specimen log-in
- Interface to automatic cassette labeler
- Entry of block IDs
- Specimen labels
- Histology slide labels
- Bar-coded slide labels
- Histology worksheets
- Interface to automatic slide stainer
- Text editing
- Word processing on central computer
- Word processing on PC workstations
- Voice-entry of gross description
- Voice-entry of final diagnosis
- Spell checker
- Gross and microscopic images integrated in reports
- Electronic signature
- Remote printing of completed reports
- Direct fax reports
- Web-based remote inquiry of reports
- Physician Web access for order entry
- Natural language search capability
- SNOMED II
- SNOMED International
- SNOMED RT/CT
- Multiple hospitals wide area network
- Sound-alike retrieval of patient history
- Autopsy measurements/organ weights
- Tumor registry reports
- Management reports
- Cytology abnormal/satisfactory list to doctors
- Cytology diagnostics statistics by pathologist/cytotechnologist
- Histology/cytology correlation report
- Reports sufficient to comply with CLIA '88 regulations
- Comprehensive billing/accounts receivable
- HIS interface: A/D/T
- HIS interface: result reporting
- HIS interface: incoming clinical results
- Interface to external billing system
- Standard ASTM/HITL-7 interface

### Software provided indexed field in each test definition for LOINC code?

| Provide LOINC dictionary for each new installation? | field available but not indexed | yes |

### Cost

- Hardware/software/installation and training (monthly maintenance)
  - Smallest stand-alone system
  - Largest stand-alone system
  - Base price of integrated system, excluding AP configuration
  - Incremental cost to add smallest AP configuration
  - Incremental cost to add largest AP configuration

- Distinguishing features (supplied by vendor)
  - designed by pathologists and lab managers
  - corporate commitment to service
  - ease of use
  - Web-enabled orders, registration, results inquiry
  - multi-facility logic/support
  - integrated AP/CAP and imaging reports

Tabulation does not represent an endorsement by the College of American Pathologists.
### Anatomic pathology computer systems

**Part 2 of 11**

See accompanying article on page 20

<table>
<thead>
<tr>
<th>Name of system</th>
<th>CoPath Plus</th>
<th>WinSurge</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of contracts for sites operating AP system (NH/IEOR/DP/PR/OS)/**</td>
<td>424 (369/20/25/10/0)</td>
<td>50</td>
</tr>
<tr>
<td>No. of installations underway but not yet live</td>
<td>44</td>
<td>1</td>
</tr>
<tr>
<td>Percentage of installations stand-alone</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Staff to develop-install-support-other**</td>
<td>19-55-87</td>
<td>—</td>
</tr>
<tr>
<td>In entire company</td>
<td>17-13-90-9/17-10-47-5</td>
<td>—</td>
</tr>
<tr>
<td>In US division (including AP) in AP systems only</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>No. of workstations_terminals in terminals operating system (min.–max.)</td>
<td>10–400+</td>
<td>4–1,200</td>
</tr>
<tr>
<td>Range in No. of surgical pathology cases per year in sites operating system</td>
<td>5,000–200,000</td>
<td>5,000–300,000</td>
</tr>
<tr>
<td>Range in No. of anatomic pathology cases per year in sites operating system</td>
<td>2,500–300,000</td>
<td>0–150,000</td>
</tr>
<tr>
<td>Central hardware</td>
<td>IBM RISC/6000, Intel Pentium, Sun Solaris</td>
<td>PCs, IBM RS/6000</td>
</tr>
<tr>
<td>Terminal/workstations</td>
<td>Intel Pentium, Mac</td>
<td>PCs, Citrix/Windows NT terminal server, Web, VNC, terminal</td>
</tr>
<tr>
<td>Innovative peripherals</td>
<td>voice input, image acquisition, bar coding, cassette/slide labelers and engravers, gross and microscopic cameras</td>
<td>auto-fax, remote-print color or B&amp;W to doctors’ offices, integrated voice in production, microscope cameras, TWINN, digital cameras, others</td>
</tr>
<tr>
<td>Network installation required?/networks supported</td>
<td>yes</td>
<td>user’s option and expense</td>
</tr>
<tr>
<td>Programming language(s)</td>
<td>Power Builder, C +</td>
<td>Caché, SQL, Crystal Reports</td>
</tr>
<tr>
<td>Databases and tools used</td>
<td>MS SQL server, Sybase</td>
<td>Word, RTF, plain text</td>
</tr>
<tr>
<td>Operating system</td>
<td>NT, AIX Unix, Sun Unix, thin client</td>
<td>Windows 2000, NT, 98, 95, Unix</td>
</tr>
</tbody>
</table>

### Features

- Surgical pathology information system
- Cytology information system
- Autopsy information system
- Specimen log-in
- Interface to automatic cassette labeler
- Entry of block IDs
- Specimen labels
- Histology slide labels
- Bar-coded slide labels
- Histology worksheets
- Interface to automatic slide stainer
- Test editing
- Word processing on central computer
- Word processing on PC workstations
- Voice-entry of gross description
- Voice-entry of final diagnosis
- Spell checker
- Gross and microscopic images integrated in reports
- Electronic signature
- Remote printing of completed reports
- Direct fax reports
- Web-based remote inquiry of reports
- Physician Web access for order entry
- Natural language search capability
- SNOMED II
- SNOMED International
- SNOMED RT/CT
- Multiple hospitals-wide area network
- Sound-alike retrieval of patient history
- Autopsy measurements/organ weights
- Tumor registry reports
- Management reports
- Cytology abnormal/un satisfactory list to doctors
- Cytology diagnostics statistics by pathologist/cytopathologist
- Histology/cytology correlation report
- Reports sufficient to comply with CLIA '88 regulations
- Comprehensive billing/accounts receivable
- HIS interface: A/D/T
- HIS interface: result reporting
- HIS interface: incoming clinical results
- Interface to external billing system
- Standard ASTM/HI-7 interface

### Software provider index field

<table>
<thead>
<tr>
<th>Source code/In the box definition</th>
<th>no</th>
<th>yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide LORC dictionary for each new installation?</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Complete ASP solution?</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Method of charging for ASP service</td>
<td>transaction-based, other (subscription)</td>
<td>no</td>
</tr>
<tr>
<td>Client software required</td>
<td>browser-based</td>
<td>—</td>
</tr>
<tr>
<td>ASP information conduit</td>
<td>operates over Internet</td>
<td>—</td>
</tr>
<tr>
<td>Client contracts supported from data center not operated by client</td>
<td>by vendor</td>
<td>—</td>
</tr>
<tr>
<td>How data center is operated</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

### Other IS interfaces

<table>
<thead>
<tr>
<th>Name of system</th>
<th>CoPath Plus</th>
<th>WinSurge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete ASP solution?</td>
<td>yes</td>
<td>no</td>
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<td>Method of charging for ASP service</td>
<td>transaction-based, other (subscription)</td>
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<tr>
<td>How data center is operated</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

### Cost (hardware/software/installation and training/monitoring maintenance)

<table>
<thead>
<tr>
<th>Name of system</th>
<th>CoPath Plus</th>
<th>WinSurge</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
<tr>
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<td>transaction-based, other (subscription)</td>
<td>—</td>
</tr>
<tr>
<td>Client software required</td>
<td>browser-based</td>
<td>—</td>
</tr>
<tr>
<td>ASP information conduit</td>
<td>operates over Internet</td>
<td>—</td>
</tr>
<tr>
<td>Client contracts supported from data center not operated by client</td>
<td>by vendor</td>
<td>—</td>
</tr>
<tr>
<td>How data center is operated</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

### Distinguishing features (supplied by vendor)

- **In LIS division (including AP) in AP systems only**
- **In entire company**
- **In US division (including AP) in AP systems only**
- **In LIS (division) in AP systems only**
- **In US (division) in AP systems only**
- **Largest stand-alone system**
- **Smallest stand-alone system**
- **Base price of integrated system, excluding AP configuration**
- **Incremental cost to add smallest AP configuration**
- **Incremental cost to add largest AP configuration**
- **Base price of integrated system, excluding AP configuration**
- **Incremental cost to add smallest AP configuration**
- **Incremental cost to add largest AP configuration**
- **Integrated image-management system**
- **Client hosted or ASP environment**
- **Web-based results reporting**
- **Flexibility around user-controlled workflow and reports**
- **Enterprise and multi-site scalability**
- **Focus on service drives company**
- **Pathology practice management companies**

Tabulation does not represent an endorsement by the College of American Pathologists.
### Anatomic pathology computer systems

#### Features
- **Surgeon pathology information system**
- **Cytopathology information system**
- **Autopsy information system**
- **Specimen log-in**
- **Interface to automatic cassette labeling**
- **Entry of block IDs**
- **Specimen labels**
- **Histology slide labels**
- **Bar-coded slide labels**
- **Histology worklists**
- **Interface to automatic slide stainer**
- **Text editing**
- **Word processing on central computer**
- **Word processing on PC workstations**
- **Voice-entry of gross description**
- **Voice-entry of final diagnosis**
- **Spell checker**
- **Requires Windows or Windows product**
- **Gross and microscopic images integrated in reports**
- **Electronic signature**
- **Remote printing of completed reports**
- **Direct fax reports**
- **Web-based remote inquiry of reports**
- **Physician Web access for order entry**
- **Natural language search capability**
- **SNOMED**
- **SNOMED II**
- **SNOMED international**
- **SNOMED RT/CT**
- **Multiple hospitals-wide area network**
- **Sound-alike retrieval of patient history**
- **Autopsy measurements/organ weights**
- **Tumor registry reports**
- **Management reports**
- **Cytology abnormal/unsatisfactory list to doctors**
- **Cytology diagnostics statistics by pathologist/cytopathologist**
- **Histology/cytology correlation report**
- **Reports sufficient to comply with CLIA-88 regulations**
- **Clinical billing/accounts receivable**
- **Cytology abnormal/unsatisfactory list to doctors**
- **Pathology interface: result reporting**
- **Pathology interface: incoming clinical results**
- **Interface to electronic billing system**
- **Standard ASTM/HL-7 interface**
- **Software provided for each installation**
- **Software includes facility index in each test definition for LOINC code**
- **Provide LOINC dictionary for each new installation**
- **System information**
- **Operating system**
- **Word processor(s)**
- **Databases and tools used**
- **Programming language(s)**
- **Innovative peripherals**
- **Terminals/workstations**
- **In LIS division (including AP)/in AP systems only**
- **In entire company**
- **No. of contracts for sites operating AP system (H/IL/C or GP/FI/OS)**
- **First LIS install./first AP system install./most recent AP system install.**
- **Hardware requirements/installation and training (monthly maintenance)**
- **Cost (hardware/software/installation and training)/monthly maintenance**
- **Other LIS interfaces**
- **Voice-recognition packages integrated with system**
- **Histology and cytopathology laboratory interfaced**
- **Source code?/user group?**
- **User can read/edit reports?/Custom programming?**
- **Hardware/software/installation and training (monthly)/maintenance**
- **Cost (hardware/software/installation and training)/monthly maintenance**
- **Other software/ready reports?/Custom programming?**
- **Existing hardware/software/installation and training (monthly)/maintenance**
### Anatomic pathology computer systems

**Part 4 of 11**

**See accompanying article on page 20**

<table>
<thead>
<tr>
<th>Name of system</th>
<th>Meditech AP application (client/server)</th>
<th>Meditech AP application (Magic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of contracts for sites operating AP system (H/L/C or GP/VP/OS)*</td>
<td>138</td>
<td>1,127</td>
</tr>
<tr>
<td>No. of sites where system is operational</td>
<td>9</td>
<td>3</td>
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<tr>
<td>No. of installations underway but not yet live</td>
<td>0%</td>
<td>9%</td>
</tr>
<tr>
<td>Percentage of installations stand-alone</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Staff to develop-install-support-other**</td>
<td>1,855 total</td>
<td>1,855 total</td>
</tr>
<tr>
<td>- In house company</td>
<td>information unavailable</td>
<td>information unavailable</td>
</tr>
<tr>
<td>- In LIS divisions (including AP)/in AP systems only</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>No. of workstations/terminals in sites operating system (min.-max.)</strong></td>
<td>S-1,000+</td>
<td>S-1,000+</td>
</tr>
<tr>
<td><strong>Range in No. of surgical pathology cases per year in sites operating system</strong></td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Range in No. of gynecologic cytology cases per year in sites operating system</strong></td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><strong>Central hardware</strong></td>
<td>Compaq, Dell, IBM</td>
<td>Compaq, IBM, Dell</td>
</tr>
<tr>
<td><strong>Terminals/workstations</strong></td>
<td>only PC workstation supported</td>
<td>terminal and PC workstation supported</td>
</tr>
<tr>
<td><strong>Innovative peripherals</strong></td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td><em><em>Network installation required</em>/networks supported</em>*</td>
<td>yes —</td>
<td>Magic C/S</td>
</tr>
<tr>
<td><strong>Programming language(s)</strong></td>
<td>—</td>
<td>Magic</td>
</tr>
<tr>
<td><strong>Database and tools used</strong></td>
<td>—</td>
<td>Magic</td>
</tr>
<tr>
<td><strong>Word processor(s) used</strong></td>
<td>MS Word, rich text</td>
<td>MS Word</td>
</tr>
<tr>
<td><strong>Operating system</strong></td>
<td>Magic</td>
<td>Magic</td>
</tr>
</tbody>
</table>

**Features**

- Surgical pathology information system
- Cytology information system
- Autopsy information system
- Specimen log-in
- Interface to automatic cassette labeler
- Entry of block ID
- Specimen labels
- Histology slide labels
- Bar-coded slide labels
- Histology worksheets
- Interface to automatic slide stainer
- Test ordering
- Word processing on central computer
- Word processing on PC workstations
- Voice-entry of gross description
- Voice-entry of final diagnosis
- Spell checker
- Grass and microscopic images integrated in reports
- Electronic signature
- Remote printing of completed reports
- Direct fax reports
- Web-based remote inquiry of reports
- Physician Web access for order entry
- Natural language search capability
- KnowledX II
- SNOWED II
- SNOWED International
- SNOWED RT/CT
- Multiple hospital-wide area network
- Sound alarma retrieval of patient history
- Autopsy measurements/organ weights
- Tumor registry reports
- Management reports
- Cytology abnormal/un satisfactory list to doctors
- Cytology diagnostics statistics by pathologist/technologist
- Histology/cytology correlation report
- Results sufficient to comply with CLIA ’88 regulations
- Comprehensive billing/accounts receivable
- HIS interface A/D/T
- HIS interface result reporting
- HIS interface: incoming clinical results
- Interface to external billing system
- Management reports
- Standard ASTM/HL-7 interfaces

**Software provides indexed field in each test definition for LOINC code?**

<table>
<thead>
<tr>
<th>no</th>
<th>no</th>
</tr>
</thead>
</table>

**Provide LOINC dictionary for each new installation?**

<table>
<thead>
<tr>
<th>no</th>
<th>no</th>
</tr>
</thead>
</table>

**Complete AP ASP solution?**

<table>
<thead>
<tr>
<th>no</th>
<th>no</th>
</tr>
</thead>
</table>

**Method of charging for ASP service**

<table>
<thead>
<tr>
<th>—</th>
<th>—</th>
</tr>
</thead>
</table>

**Client software required**

<table>
<thead>
<tr>
<th>—</th>
<th>—</th>
</tr>
</thead>
</table>

**ASP information conduit**

<table>
<thead>
<tr>
<th>—</th>
<th>—</th>
</tr>
</thead>
</table>

**Client contracts supported from data center not operated by client**

<table>
<thead>
<tr>
<th>—</th>
<th>—</th>
</tr>
</thead>
</table>

**How data center is operated**

<table>
<thead>
<tr>
<th>—</th>
<th>—</th>
</tr>
</thead>
</table>

**Other IS interfaces**

- Voice-recognition packages integrated with system
- Histology and cytology laboratory instruments interfaced

**Sunquest, Mic laxxson, SMS, many others**

**Dragon Systems**

**Source code?*/user group?**

<table>
<thead>
<tr>
<th>yes</th>
<th>yes</th>
</tr>
</thead>
</table>

**User can modify screens?**

<table>
<thead>
<tr>
<th>yes</th>
<th>yes</th>
</tr>
</thead>
</table>

**User-defined report writer?/Custom programming?**

<table>
<thead>
<tr>
<th>yes—</th>
<th>yes—</th>
</tr>
</thead>
</table>

**Cost**

- hardware/software/installation and training/monthly maintenance
- Smallest stand-alone system
- Largest stand-alone system
- Base price of integrated system, excluding AP configuration
- Incremental cost to add smallest AP configuration
- Incremental cost to add largest AP configuration

**Distinguishing features (supplied by vendor)**

- over 30 years’ experience developing & implementing LISs
- seamless support for labs in an integrated delivery network
- accurate, up-to-the-minute patient data & charge information
- over 30 years’ experience developing & implementing LISs
- seamless support for labs in an integrated delivery network
- accurate, up-to-the-minute patient data & charge information

<table>
<thead>
<tr>
<th>27</th>
<th>27</th>
</tr>
</thead>
</table>

---

*H/L/C hospitals, E/independent labs in U.S., C or GP/VPs or group practices in U.S., F/foreign installations, OS/other sites
**O=one site, U=rural, metropolitan, administration, and other company functions

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<table>
<thead>
<tr>
<th>Features</th>
<th>IntelliPath</th>
<th>NovoPath</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgical pathology information system</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Cytopathology information system</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Autopsy information system</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Tissue specimens log-in</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>HDI interface to automatic cassette labeling system</td>
<td>available but not installed</td>
<td>installed</td>
</tr>
<tr>
<td>Entry of block IDs</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Specimen labels</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Histology slide labels</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Bar-coded slide labels</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Histology worksheets</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Interface to automatic slide stainer</td>
<td>not available</td>
<td>available but not installed</td>
</tr>
<tr>
<td>Text editing</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Word processing on central computer</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Word processing on PC workstations</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Voice entry of gross description</td>
<td>available second quarter 2002</td>
<td>installed</td>
</tr>
<tr>
<td>Voice entry of final diagnosis</td>
<td>available second quarter 2002</td>
<td>installed</td>
</tr>
<tr>
<td>Spell checker</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Gross and microscopic images integrated in reports</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Electronic signature</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Remote printing of completed reports</td>
<td>available but not installed</td>
<td>installed</td>
</tr>
<tr>
<td>Direct fax reports</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Web-based remote inquiry of reports</td>
<td>available second quarter 2002</td>
<td>installed</td>
</tr>
<tr>
<td>Natural language search capability</td>
<td>installed</td>
<td>available but not installed</td>
</tr>
<tr>
<td><strong>SNIPED II</strong></td>
<td>available but not installed</td>
<td>available but not installed</td>
</tr>
<tr>
<td><strong>SNIPED International</strong></td>
<td>available but not installed</td>
<td>available but not installed</td>
</tr>
<tr>
<td><strong>SNIPED RT/CT</strong></td>
<td>available but not installed</td>
<td>available but not installed</td>
</tr>
<tr>
<td>Multiple hospital-wide area network</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Sound-alike retrieval of patient history</td>
<td>not available</td>
<td>installed</td>
</tr>
<tr>
<td>Autopsy measurements/organ weights</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Tumor registry reports</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Management reports</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Cytology abnormal/un satisfactory list to doctors</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Cytology diagnostics statistics by pathologist/cytotechnologist</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Histology/cytology correlation report</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Reports sufficient to comply with CLIA `88 regulations</td>
<td>not available</td>
<td>installed</td>
</tr>
<tr>
<td>Comprehensive billing/accounts receivable</td>
<td>available but not installed</td>
<td>installed</td>
</tr>
<tr>
<td>HIS interface: A/D/T</td>
<td>available but not installed</td>
<td>installed</td>
</tr>
<tr>
<td>HIS interface: result reporting</td>
<td>available but not installed</td>
<td>installed</td>
</tr>
<tr>
<td>HIS interface: incoming clinical results</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Interface to external billing system</td>
<td>installed</td>
<td>installed</td>
</tr>
<tr>
<td>Standard ASTM/HL-7 interface</td>
<td>installed</td>
<td>installed</td>
</tr>
</tbody>
</table>

**Software provider identified field in each test definition for LOINC code?**

- No
- Provided LOINC dictionary for each new installation?

- Yes
- No

**Completes AP ASP solution?**

- No
- Yes

**Method of charging for ASP service**

- Fixed fee
- Browser based, requires software to be installed on client PC
- Operates over Internet
- Other

**Client contact software used**

- Bill Hughes, bhughes@netsoftusa.com
- Mai Abdala, sales@novovision.com

**Voice-recognition packages integrated with system**

- IDX
- Dragon Systems Naturally Speaking, Medical Suite

**Source code/ User Group**

- Yes/no
- Yes/yes

**User-defined report writer? Custom programming?**

- Yes
- No

**Web-based electronic reports?**

- Yes
- No

**Other IS Interfaces**

- HL-7 Interface and ASCII file transfer
- Other

**System Requirements**

- Intel-based server or Windows NT or 2000
- PC-based or Internet Explorer running on non-Intel-based PCs
- Bar-code printing, voice recognition, insight digital camera
- Windows 98, NT, 2000, XP, Novell

**Cost (hardware/software/installation and training/monthly maintenance)**

- Smallest stand-alone system
- Largest stand-alone system
- Base price of integrated system, excluding AP configuration
- Incremental cost to add smallest AP configuration
- Incremental cost to add largest AP configuration

**Distinguishing Features**

- Web browser-based electronic reporting/image capture sign-out
- Total central server report formatting: no limit on no. of formats
- Live, fast, and responsive technical support

---

**Footer Text:**

Tabulation does not represent an endorsement by the College of American Pathologists.
### Anatomic pathology computer systems

#### Opus Healthcare Solutions Inc.

**Shelli Allen**
saling@opushealthcare.com
1071 N. Ranch Rd., Ste. 400, Austin, TX 78726
(800) 676-3371
opushealthcare.com

#### PathLogix Corp.

**Jerry Grayson**
sinfo@pathlogix.com
470 Headquarters St., 408a, Lj, CA 92037
(909) 454-8830
www.pathlogix.com

#### Name of system

<table>
<thead>
<tr>
<th>OpusAP</th>
<th>PathLogix</th>
</tr>
</thead>
<tbody>
<tr>
<td>First US install/first AP system install/restore recent AP system install.</td>
<td>—/1998/2001</td>
</tr>
<tr>
<td>No. of contracts for sites operating AP system (H/HC or GP/PH/DS)*</td>
<td>3 (3/0/0/0)</td>
</tr>
<tr>
<td>No. of sites where system is operational</td>
<td>64 (3/42/0/10)</td>
</tr>
<tr>
<td>No. of installations underway but not yet live</td>
<td>4</td>
</tr>
<tr>
<td>Percentage of installations stand-alone</td>
<td>0%</td>
</tr>
<tr>
<td>Staff to develop install-support other**</td>
<td>90%</td>
</tr>
<tr>
<td>• In entire company</td>
<td>2-14-7-6</td>
</tr>
<tr>
<td>• In LIS division (including AP) in AP systems only</td>
<td>—</td>
</tr>
</tbody>
</table>

#### File no./contract no. for sites operating system

| — | — |

#### Central hardware

| — | standard hardware that supports Windows applications |

#### Terminals/workstations

| — | standard terminals |

#### Innovative peripherals

| n/a | voice recognition, professional imaging, billing syst., interfaces, others |

#### Network installation required?/networks supported

| yes | Visual Basic, SQL |

#### Programming language(s)

| C++ | — |

#### Databases and tools used

| proprietary, Postgres | SQL server, Access |

#### Word processor(s)/user group?

| proprietary text editor | integrated HTML word processor |

#### Operating system

| HP-UX | Windows 95, NT, 2000, XP |

#### Features

| • Surgical pathology information system | installed |
| • Cytology information system | installed |
| • Autopsy information system | installed |
| • Specimen log-in | installed |
| • Interface to automatic or customized labeler | not available |
| • Entry of block IDs | installed |
| • Specimen labels | installed |
| • Histology slide labels | installed |
| • Bar-coded slide labels | installed |
| • Histology worksheets | installed |
| • Interface to automatic slide stainer | not available |
| • Text editing | — |
| • Word processing on central computer | — |
| • Word processing on PC workstations | — |
| • Voice-entry of gross description | — |
| • Voice-entry of final diagnosis | — |
| • Spell checker | — |
| • Gross and microscopic images integrated in reports | — |
| • Electronic signature | — |
| • Remote printing of completed reports | — |
| • Direct fax reports | — |
| • Web-based remote inquiry of reports | — |
| • Physician Web access for order entry | — |
| • Natural language search capability | — |
| • SNOMED II | — |
| • SNOMED international | — |
| • SNOMED RT/CT | — |
| • Multiple hospitability-wide area network | — |
| • Sound-alike retrieval of patient history | — |
| • Autopsy measurements/organ weights | installed |
| • Tumor registry reports | installed |
| • Management reports | installed |
| • Cytology abnormal/satisfactory list to doctors | not available |
| • Cytology diagnostics statistics by pathologist/cytotechnologist | installed |
| • Histology/cytology correlation report | installed |
| • Reports sufficient to comply with CLIA '88 regulations | installed |
| • Comprehensive billing/accounts receivable | installed |
| • HIS interface: A/O/T | installed |
| • HIS interface: result reporting | installed |
| • HIS interface: incoming clinical results | installed |
| • Interface to external billing system | installed |
| • Standard ASTM/HL-7 interface | installed |

#### Software provided includes field in each test definition for LOINC code?

| no | — |

**Provide LOINC dictionary for each new installation?**

| no | — |

#### Complete AP ASP solution?

| available on request | no |

**Method of charging for ASP service**

| — | — |

**Client software required**

| — | — |

**ASP information conduit**

| — | — |

**Client contracts supported from data center not operated by client**

| — | — |

**How data center is operated**

| — | — |

#### Other HIS interfaces

| billing and hospital information systems | — |

**Voice-recognition packages integrated with system**

| — | — |

**Histology and cytology laboratory instruments interfaced**

| — | — |

#### Source code/∼user group?

| —/yes | —/yes |

**User can modify screens?**

| yes | yes |

**User-defined report writer?/Custom programming?**

| no/yes | yes/yes |

#### Cost (hardware/software/installation and training/monthly maintenance)

| —/52.5k/—/— | —/52.5k/—/— |

**Smallest stand-alone system**

| — | — |

**Largest stand-alone system**

| — | — |

**Base price of integrated system, excluding AP configuration**

| — | — |

**Incremental cost to add smallest AP configuration**

| — | — |

**Incremental cost to add largest AP configuration**

| — | — |

#### Distinguishing features (supplied by vendor)

| database built around workflow needs of each facility | — |

| Outcomes does not allow cases with required outstanding work to be finalized | — |

| Psysparse random 30 percent rescanner of negative cases is automatic | — |

| advanced imaging; Internet; voice-recognition capability | — |

| fast and easy to use; outstanding customer satisfaction | — |

| flexibility and scalability to meet changing needs | — |
## Anatomic pathology computer systems

### Part 7 of 11

See accompanying article on page 20

<table>
<thead>
<tr>
<th>Name of system</th>
<th>Anatom</th>
<th>WindPath</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of contracts for sites operating AP system (H/C/L or GP/P/OS)*</td>
<td>14</td>
<td>35 (3/15/8/0)</td>
</tr>
<tr>
<td>No. of sites where system is operational</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>No. of installations underway but not yet live</td>
<td>—</td>
<td>40%</td>
</tr>
<tr>
<td>Percentage of installations stand-alone</td>
<td>—</td>
<td>90%</td>
</tr>
<tr>
<td>Staff to develop-install-support-other**</td>
<td>—</td>
<td>10-10-12-7</td>
</tr>
</tbody>
</table>
| In intra company | — | — /— /— /—-
| In US LIS division (including AP)/in AP systems only | — | — /— /— /—-
| No. of workstations/terminals in sites operating system (min.-max.) | 1-25 | 1-45 |
| Range in No. of surgical pathology cases per year in sites operating system | —800-20,000 cytology (2,400 histology) | 1,000-40,000 |
| Range in No. of gynecologic cytology cases per year in sites operating sys. | —800-20,000 | 5,000-100,000 |
| Central hardware | — | HP or equivalent (HP LC2000 Netserver or equivalent) |
| Terminals/workstations | — | HP or equivalent (HP Vectra VL400 or equivalent) |
| Innovative peripherals | — | voice recognition, professional imaging integrated in WindPath |
| Network installation required?/networks supported | no | yes |
| Programming language(s) | Datafax (Delphi)/extended systems | SmallTalk Visual Basic |
| Databases and lists used | Datafax, extended systems | MS SQL server 7.0, 2000 |
| Word processor(s) used | MS Word, Corel WordPerfect | BrioQuery, Report Writer FasQing (RightFax) |
| Operating system | Windows, Unix, DOS | integrated |

### Features

- **Base price of integrated system, excluding AP configuration**
  - Installed: $1.4k/$3.02k
  - Installed: $125k/$150.995k
  - Installed: $16k/$21.135k
  - Installed: $1k/$3.634k

- **Cost (hardware/software/installation and training)/monthly maintenance**
  - Installed: $10k/$21.135k
  - Installed: $125k/$150.995k
  - Installed: $12k/$13.634k
  - Installed: $1k/$3.634k

- **Installation**
  - Installed: $1.4k/$3.02k
  - Installed: $125k/$150.995k
  - Installed: $16k/$21.135k
  - Installed: $1k/$3.634k

- **Anti-file–locking benefit allows multiple same-case viewing**
  - Installed: $1.4k/$3.02k
  - Installed: $125k/$150.995k
  - Installed: $16k/$21.135k
  - Installed: $1k/$3.634k

- **U.S. hospitals, q-independent labs in U.S., q-gp/clinical or group practices in U.S., q-foreign installations, oq-otherwise**
  - Installed: $10k/$21.135k
  - Installed: $125k/$150.995k
  - Installed: $12k/$13.634k
  - Installed: $1k/$3.634k

- **Footnote**
  - Installed: $10k/$21.135k
  - Installed: $125k/$150.995k
  - Installed: $12k/$13.634k
  - Installed: $1k/$3.634k

- **System review series**
  - Installed: $10k/$21.135k
  - Installed: $125k/$150.995k
  - Installed: $12k/$13.634k
  - Installed: $1k/$3.634k

### Summary

**vendor contact information**
- **Anatom**
  - (812) 265-2808/(800) 262-6289
  - 412 Mulberry St., Madison, IN 47250
  - Daniel J. Hellmann
  - anatrol@seidata.com
- **WindPath**
  - (800) 345-1514
  - 321 Fortune Blvd., Milford, MA 01757
  - Deborah Freeman
  - info@psychesystems.com

**Additional notes**
- **software provides indexed field in each test definition for LOINC code?**
  - Installed: no

- **provide LOINC dictionary for new each installation?**
  - Installed: no

- **complete AP ASP solution?**
  - Installed: no

- **Method of charging for ASP service**
  - Installed: no

- **Client software required?**
  - Installed: no

- **ASP information conduit**
  - Installed: no

- **Client contracts supported from data center not operated by client**
  - Installed: no

- **How data center is operated**
  - Installed: no

- **Other IS interfaces**
  - Installed: no

- **Voice-recognition packages integrated with system**
  - Installed: no

- **Histology and cytology laboratory instruments interfaced**
  - Installed: no

- **Source code/? user group**
  - Installed: no

- **User can modify screens?**
  - Installed: no

- **User defined report writer?/Custom programming?**
  - Installed: no

- **Cost (hardware/software/installation and training)/monthly maintenance**
  - Installed: $10k/$21.135k
  - Installed: $125k/$150.995k
  - Installed: $12k/$13.634k

- **Base cost of integrated system, excluding AP configuration**
  - Installed: $10k/$21.135k
  - Installed: $125k/$150.995k
  - Installed: $12k/$13.634k

- **Incremental cost to add smallest AP configuration**
  - Installed: $10k/$21.135k
  - Installed: $125k/$150.995k
  - Installed: $12k/$13.634k

- **Distinguishing features (supplied by vendor)**
  - Installed: $10k/$21.135k
  - Installed: $125k/$150.995k
  - Installed: $12k/$13.634k

**footnote**
- **anti-file–locking benefit allows multiple same-case viewing**
- **optional internal or external word processing**
- **fast response time due to object-oriented design providing minimum hardware**
- **monthly maintenance fee for interfaces varies**
Anatomic pathology computer systems

Part 8 of 11

See accompanying article on page 20

SCC Soft Computer
Ellie Volman
34320 U.S. 19 North, Palm Harbor, FL 34684
(727) 789-0100 www.softcomputer.com

SIA las Sysmex company
811 Blair
Syracuse NY 13210
(315) 455-4624 www.sia-las.com

Name of system
SoftPath
Molis Anatomic Pathology

First LIS install./first AP system install/reset recent AP system install.
1978/1993/—
1983/1983/—
No. of contracts for sites operating AP system (H/L/C or GP/P/G5)
140 (105/10/3/22/0)
20
No. of sites where system is operational
—
—
No. of installations underway but not yet live
16%
20%
Percentage of installations stand-alone
—
—
Staff to develop-install-support-other**
—
—
• In entire company
276-185-147-112
207-139-110-84-39-8-15-5
• In LIS (division including AP) in AP systems only
—
—
16%

No. of workstations/terminals in sites operating system (min.–max.)

Range in No. of surgical pathology cases per year in sites operating system
5–110
1,000–75,000
Range in No. of gynecologic cytology cases per year in sites operating system.
5,000–400,000
3,000–75,000

Central hardware

IBM pSeries (RS/6000), HP 9000
cPcs
multiple voice options, telepathology via Internet, images and lab results on pathology report, integrated MS Word, bar coding

Operating System
Unix, Windows NT
Windows 2000

Features

• Surgical pathology information system
installed
installed
• Cytopathology information system
installed
installed
• Autopsy information system
installed
installed
• Specimen log-in
installed
installed
• Interface to automatic cassette labeler
installed
installed
• Entry of block IDs
installed
installed
• Specimen labels
installed
installed
• Histology slide labels
installed
installed
• Bar-coded slide labels
installed
installed
• Histology worksheets
installed
installed
• Interface to automatic slide stainer
not available
available but not installed
• Text editing
installed
installed
• Word processing on central computer
installed
installed
• Word processing on PC workstations
installed
installed
• Voice-entry of gross description
not available
not available
• Voice-entry of final diagnosis
not available
not available
• Spell checker
installed
installed
• Gross and microscopic images integrated in reports
installed
installed
• Electronic signature
installed
installed
• Remote printing of completed reports
installed
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• Multiple hospital-wide area network
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not available
• Autopsy measurements/organ weights
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• Tumor registry reports
not available
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• Management reports
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• Cytopathology/alien/unclassified/test to doctors
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installed
• Cytopathology diagnostics statistics by pathologist/cytotechnologist
installed
installed
• Histology/cytology correlation report
installed
installed
• Reports sufficient to comply with CLIA ’88 regulations
installed
installed
• Comprehensive billing/accounts receivable
installed
installed
• HIS interface: A/D/T
installed
installed
• HIS interface: result reporting
installed
installed
• HIS interface: incoming clinical results
installed
installed
• Interface to external billing system
installed
installed
• Standard ASTM/HL-7 interface?
yes
yes
• Snomed C882
installed
installed
• COMPARTS
installed
installed
• PowerPath
installed
installed
• BioPath
installed
installed
• Labaday
installed
installed
• LabPath
installed
installed
• MedPath
installed
installed
• ChainPath
installed
installed
• MedLink
installed
installed
• SIA (a Sysmex company)
installed
installed
• Molis Pathology
installed
installed
• SIA Anatomic Pathology
installed
installed

Other IS interfaces

Voice-recognition packages integrated with system
IBM MedSpeak, Dragon
HISCOMM, Molis, Delphic

Histology and cytopathology laboratory instruments interfaced
G2, Dragon, IBM, L&H
cassette printer, image scanner, bar-code scanner, others

Source code?/User Group
excel/yes
yes

User can modify screens?
yes
yes

• User-defined report writer?/Custom programming?
yes/yes
yes/yes

Software provider indexed field in each test definition for LONIC code?
no
no

Provide LONIC dictionary for each new installation?
no
no

Cost (hardware/software/installation and training/monthly maintenance)

• Smallest stand-alone system
—
$15K/$30K/$60K/$1.5K
• Largest stand-alone system
—
$3K/$6K/$15K/$3.2K

Base price of integrated system, excluding AP configuration
—
—
• Incremental cost to add smallest AP configuration
—
—
• Incremental cost to add largest AP configuration
—
—

Distinguishing features (supplied by vendor)

— leading best-of-breed US vendor; accommodates all environments
— lab results & images integrated in reports, available via Internet
— comprehensive quality assurance program
— uses groupware to control workflows
— case of use—integrated word processing
— paperless

Tabulation does not represent an endorsement by the College of American Pathologists.
**Anatomic pathology computer systems**

### Features

- **Surgical pathology information system**
- **Cytopathology information system**
- **Autopsy information system**
- **Specimen log-in**
- **Histology slide labels**
- **Bar-coded slide labels**
- **Histology worksheets**
- **Interface to automatic slide stainer**
- **Text editing**
- **Word processing on central computer**
- **Word processing on PC workstations**
- **Voice-entry of gross description**
- **Voice-entry of final diagnosis**
- **Spellchecker**
- **Gross and microscopic images integrated in reports**
- **Electronic signature**
- **Remote printing of completed reports**
- **Direct fax reports**
- **Web-based remote inquiry of reports**
- **Physician Web access for order entry**
- **Natural language search capability**
- **SNOMED II**
- **SNOMED International**
- **Multiple hospital-wide area network**
- **Sound-alike retrieval of patient history**
- **Pathology report management system**
- **Tumor registry reports**
- **Management reports**
- **Cytology abnormal/un satisfactory list to doctors**
- **Cytology diagnostics statistics by pathologist/cytotechnologist**
- **Histology/cytology correlation report**
- **Reports sufficient to comply with CLIA '88 regulations**
- **Comprehensive billing/accounts receivable**
- **HIS interface: A/D/T**
- **HIS interface: result reporting**
- **HIS interface: incoming clinical results**
- **Interface to external billing system**
- **Standard ASTM/HI 7 interface**

### Operating System

- **Windows 95, NT, NT, ME, 2000**
- **Macintosh platforms**
- **Macintosh**
- **IBM, Compaq**
- **Dell**
- **Dell**
- **AIX, NT server**
- **NT workstation**

### Software provider/industried field in each test definition for LONIC code

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LONIC</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>CoPath</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>CoPath+</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>

### Cost

- **Smallest stand-alone system**
- **Largest stand-alone system**
- **Base price of integrated system, excluding AP configuration**
- **Incremental cost to add smallest AP configuration**
- **Incremental cost to add largest AP configuration**

### Distinctive features

- **Customized solutions**
- **Laborated in features design**
- **Integration with FlexiLab LIS—ADT, results, billing inquiry**
- **Flexible screens, reports, and ad hoc reports**

---

**Notes:**

1. [H/L: hospitals, L: laboratories in U.S., L: LONIC (or similar lab) in U.S. or foreign lab; S: stand-alone systems; G: group practice in U.S., G: group practice in foreign lab; S: stand-alone systems; G: group practice in foreign lab]

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**Tabulation does not represent an endorsement by the College of American Pathologists.**
### Anatomic pathology computer systems

**PowerPath**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Installed</th>
<th>Available but not installed</th>
<th>Not available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proven in high-volume laboratories</td>
<td>yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Designed for multiple laboratory, IDN environment</td>
<td>yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully integrated modules; single database design</td>
<td>yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range of pricing</td>
<td>$1m/$2m/$500k/$25k</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Requires use of private, dedicated circuit</td>
<td>yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voice input, optical storage, bar-code input, image capture &amp; retrieval interfaces</td>
<td>yes/TCP/IP, Novell, Unix</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other IS interfaces</td>
<td>McKesson, Seimens, IDX, Epixsys, Cerner</td>
<td>IDX/Phenix, SMS, McKesson, Meditech, UHCare, IDX, CompusCare, Cerner</td>
<td></td>
</tr>
<tr>
<td>Voice-recognition packages integrated with system</td>
<td>n/a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History and cytoLOGY laboratory instruments</td>
<td>n/a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source code/user group</td>
<td>escrow/yes</td>
<td>escrow/yes</td>
<td></td>
</tr>
<tr>
<td>User can modify group</td>
<td>no</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>User-defined report writer/Custom programming</td>
<td>yes</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>Cost (hardware/software/installation and training/monthly maintenance)</td>
<td>$55k/$150k/$125k/$3,5k</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smallest stand-alone system</td>
<td>$12m/$2m/$500k/$25k</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base price of integrated system, excluding AP configuration</td>
<td>$55k</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incremental cost to add smallest AP configuration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incremental cost to add largest AP configuration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distinguishing features (supplied by vendor)</td>
<td>AP systems leader</td>
<td>fully integrated modules; single database design</td>
<td></td>
</tr>
<tr>
<td></td>
<td>“Can cas” workflow</td>
<td>designed for multiple laboratory, IDN environment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+ outstanding customer satisfaction</td>
<td>proven in high-volume laboratories</td>
<td></td>
</tr>
</tbody>
</table>

**Ultra AP**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Installed</th>
<th>Available but not installed</th>
<th>Not available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outstanding customer satisfaction</td>
<td>yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Designed for multiple laboratory, IDN environment</td>
<td>yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proven in high-volume laboratories</td>
<td>yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base price of system</td>
<td>$2,000,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Software provides indexed field in each test definition for LONIC code?</td>
<td>no</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>Provide LONIC dictionary for each new installation</td>
<td>no</td>
<td>no</td>
<td></td>
</tr>
<tr>
<td>Completes AP ASP solution?</td>
<td>no</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>Method of charging for ASP service</td>
<td>fixed fee or transaction-based</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client software required</td>
<td>browser-based</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASP Information conduit</td>
<td>requires use of private, dedicated circuit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client contracts supported from data center not operated by client</td>
<td>by a third-party (customer site)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>How new data center is operated</td>
<td>n/a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voice recognition packages integrated with system</td>
<td>McKesson, Seimens, IDX, Epixsys, Cerner</td>
<td>IDX/Phenix, SMS, McKesson, Meditech, UHCare, IDX, CompusCare, Cerner</td>
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<td>yes</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>+ outstanding customer satisfaction</td>
<td>proven in high-volume laboratories</td>
<td></td>
</tr>
</tbody>
</table>

### Name of system

**PowerPath**

- Tamtron Corp.
  - Mark Cesa: sales@tamtron.com
  - 6203 San Ignacio Ave., Ste. 110, San Jose, CA 95037
  - (408) 972-9600
  - www.tamtron.com

**Ultra AP**

- Triple G Systems Group Inc.
  - Angelica Law: info@tleg.com
  - 1000 Etiwanda Ave. East, Ste. 600, Harkham, Ontario, Canada L3R 8T3
  - (855) 305-0941
  - www.tleg.com

### Central hardware

- Operating system
  - Windows
  - Novell
  - Unix

### Databases and tools used

- Database: MS SQL
- Word processors: MS Word
- Spell checker
- Gross and microscopic images integrated in reports
- Other IS interfaces
  - Database: PowerPath
  - Database: Ultra AP

### Word processor(s) used

- MS Word
- Word processing on PC workstations

### Databases and tools used

- Network installation required?
  - yes
- Databases and tools supported
  - Escrow
- Databases and tools required
  - No

### Features

- Appliance
- Hardware/software
- Storage
- Licensing
- Development tool kit included
- Integrated histology and cytology engine

### Name of system

- Review series
- System

**Tabulation does not represent an endorsement by the College of American Pathologists.**

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**Footnotes:**

1. [HIV/AIDS, ID, or independent labs in U.S.]
2. [AP systems leader in group practices in U.S., foreign installations, or other sites]
3. [Full integrated modules; single database design]
4. [Designed for multiple laboratory, IDN environment]
5. [Proven in high-volume laboratories]
## Anatomic Pathology Computer Systems

### Part 11 of 11

See accompanying article on page 20

### Name of System

<table>
<thead>
<tr>
<th>Name of System</th>
<th>Integrity</th>
</tr>
</thead>
<tbody>
<tr>
<td>First LIS install/first AP system install/rest. recent AP system install.</td>
<td>1998/1998/2001*</td>
</tr>
<tr>
<td>No. of contracts for sites operating AP system (H/IL/C or GP/R/OS)*</td>
<td>none (six copies sent out over Internet)**</td>
</tr>
<tr>
<td>No. of sites where system is operational</td>
<td>unknown***</td>
</tr>
<tr>
<td>No. of installations under way but not yet live</td>
<td>1 total</td>
</tr>
<tr>
<td>Percentage of installations stand-alone</td>
<td>—</td>
</tr>
<tr>
<td>Staff to develop/install/support other**</td>
<td>—</td>
</tr>
<tr>
<td>• In entire company</td>
<td>—</td>
</tr>
<tr>
<td>• In US division (including AP) in AP systems only</td>
<td>—</td>
</tr>
<tr>
<td>**other=sales, marketing, administration, and other company functions</td>
<td></td>
</tr>
</tbody>
</table>

### Central Hardware

<table>
<thead>
<tr>
<th>Central hardware</th>
<th>IBM PCs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terminals/workstations</td>
<td>voice input, others</td>
</tr>
<tr>
<td>Innovative peripherals</td>
<td>VBA</td>
</tr>
<tr>
<td>Database and tools used</td>
<td>MS Access</td>
</tr>
<tr>
<td>Operating system</td>
<td>Windows 95, 98, ME, XP</td>
</tr>
</tbody>
</table>

### Features

- **Surgical pathology information system**
- **Cytopathology information system**
- **Autopsy pathology information system**
- **Specimen log-in**
- **Interface to automatic cassette labeler**
- **Entry of block IDs**
- **Sample labels**
- **Histology slide labels**
- **Bar-coded slide labels**
- **Histology worksheets**
- **Interface to automatic slide stainer**
- **Text editing**
- **Word processing on central computer**
- **Word processing on PC workstations**
- **Voice entry of gross description**
- **Voice entry of final diagnosis**
- **Spell checker**
- **Gross and microscopic images integrated in reports**
- **Electronic signature**
- **Remote printing of completed reports**
- **Direct fax reports**
- **Web-based remote inquiry of reports**
- **Physician Web access for order entry**
- **Natural language search capability**
- **SNOMED II**
- **SNOMED International**
- **SNOMED RT/CT**
- **Multiple hospital-wide area network**
- **Sound-alike retrieval of patient history**
- **Autopsy measurements/organ weights**
- **Tumor registry reports**
- **Management reports**
- **Cytology abnormal/unatisfactory list to doctors**
- **Cytology diagnostics statistics by pathologist/cytopathologist**
- **Histology/cytology correlation report**
- **Reports sufficient to comply with CLIA '88 regulations**
- **Comprehensive billing/accounts receivable**
- **HIS interface: A/D/T**
- **HIS interface: result reporting**
- **HIS interface: incoming clinical results**
- **Interface to external billing system**
- **Standard ASTM/HL-7 interface?**

### Operating System

- Windows 95, 98, ME, XP
- any possible; Dragon Naturally Speaking in use

### Software

- Provide LONIC dictionary for each new installation? no
- no

### Complete AP ASP solution?

- no
- no

### Method of charging for ASP service

- no
- no

### ISP information conduit

- no
- no

### Client contracts supported from data center not operated by client

- no
- no

### No. of sites where system is operational (min.–max.)

- 7,500
- 13,000

### No. of workstations/terminals in sites operating system (min.–max.)

- 1

### Range in No. of surgical pathology cases per year in sites operating system

- 7

### Range in No. of gynecologic cytology cases per year in sites operating system

- 5,000

### No. of workstations/terminals in sites operating system (min.–max.)

- 7

### Range in No. of surgical pathology cases per year in sites operating system

- 5,000

### No. of sites where system is operational

- 1,000

### No. of contracts for sites operating AP system (H/IL/C or GP/R/OS)*

- none

### First LIS install/first AP system install/rest. recent AP system install.

- 1998/1998/2001*

### Open architecture

- open code allows customization for individual needs

### Other IS Interfaces

- Voice-recognition packages integrated with system
- McKesson
- Dragon Naturally Speaking
- none

### Source code/user group?

- yes/no
- yes

### User can modify screen(s)?

- yes
- yes/yes

### User-defined report writer?/Custom programming?

- yes
- yes/yes

### Cost

- (hardware/software/installation and training/monthly maintenance)
- $1k

### Base price of integrated system excluding AP configuration

- $1k

### Incremental cost to add largest AP configuration

- $1k

### Incremental cost to add smallest AP configuration

- $1k

### Distinguishing features (supplied by vendor)

- • Interface to external billing system
- • Standard ASTM/HL-7 interface?
- • Based on MS Office Access ‘97 or 2000
- • many features to speed sign out and create reports
- • open code allows customization for individual needs
- • all info. applies to syst. operated by Wm. Shang, MD, unless indicated
- • freeware, open architecture

---

**H/IL/C, hospitals, IL—-independent labs in U.S., C or GP=clinics or group practices in U.S., Fl-foreign installations, OS=other sites**

**other=sales, marketing, administration, and other company functions**

**freeware, open architecture**

---

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