Summary of AutoCode Features

- Natural language processing with negation detection
- Lexicon driven concept identification
- Handles ambiguous terminology, acronyms and abbreviations
- Fully integrated rule-based inference engine
- Lexicon Manager desktop application for Windows
- Quick Test desktop application for Windows
- HL7 and XML data import/export capability
- Integrates with AIM’s TransMed Application Integration Engine
- AutoCode DLL API for embedded applications

Technical Requirements

AutoCode is available for Microsoft Windows 2000 SP4, Windows XP SP2, Windows Server 2003 SP1. At least 128MB RAM and 100MB of available disk space are required. Disk space requirements will vary depending on the number of lexicons and volume of documents being processed.

Licensing Information

AutoCode can be licensed and installed in your environment on a fixed term non-exclusive basis. License fees will depend on the volume of information to be processed and the cost of developing custom lexicons.

AutoCoding Services

As an alternative to software licensing, AIM offers AutoCoding Services for:

- Document indexing
- Document abstracting
- Content analysis
- Semantic searches of databases or files

Simply provide us with access to the target documents and specify the subject area for concept coding. We will develop any required lexicons, assess and tune coding performance, and perform the task for you. Service fees are per engagement and vary depending on the nature and complexity of the task.

Codify • Summarize • Index

Abstract and codify concepts in text for knowledge mining, document indexing, retrieval and summary reporting.
Digital documents contain valuable information, but finding what you need can be a challenge because it is often embedded in the text. Consequently, if you want to find documents containing specific information you have to rely on an index, or an abstract, to help with your search. However, if the index doesn’t cover your area of interest, you won’t find the documents you need.

AutoCode lets you automatically index and codify information in text. AutoCode consists of a natural language parser, an inference engine, and lexicons. AutoCode, with a specific lexicon, will search text for the concepts contained in that lexicon.

For example, using an ICD-O-3 lexicon 1, AutoCode can identify and extract cancer morphology and topography from the narrative text of pathology reports and express these concepts using standard ICD-O-3 codes.

**Currently Available Lexicons**

AIM develops and distributes lexicons for specific applications. AIM’s lexicons are built and tested using a large corpus of reference documents and tuned for optimum performance. The following lexicons are currently available:

<table>
<thead>
<tr>
<th>Lexicon</th>
<th>Description</th>
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| Morphology and Topography for Cancer Pathology (based on ICD-O-3) | - Automatic detection of cancer diagnoses  
- Categorization of pathology reports by cancer site  
- Categorization of pathology reports by disease type  
- Coding of primary tumor site and morphology |
| Synoptic Data Elements for Pathology Reporting by Cancer Type | - Assessing completeness of pathology reports (i.e. is all required information provided in the text?)  
- Producing synoptic abstracts from narrative pathology reports (see Fig. 2)  
- Extracting specific characteristics of cancer (stage, grade, tumor size, margins, nodal involvement, etc.) |

**Context Sensitive Parsing**

What distinguishes AutoCode from other automated coding systems is its context sensitive parsing capability. This allows AutoCode to not only identify concepts in text, but also the negation of concepts, something that simple keyword searches cannot do. What’s more, AutoCode handles variations in wording and ambiguous terminology. These features enable AutoCode to achieve very high sensitivity and specificity scores when used as a document filter.

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1 International Classification of Disease - Oncology, 3rd Edition: World Health Organization
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Our engineers and technicians understand the medical environment, its paradigms, processes and needs. AIM provides comprehensive information technology services to the healthcare industry to meet the special requirements of clinical and research systems.

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