

# SMART Lexicon Manager

## Terminology Management

Smart Communications, Inc., New York, is an *Artificial Intelligence* boutique with 20+ years experience in software development. Our expertise is in Artificial Intelligence (AI), Natural Language Processing (NLP) and language engineering for publishing systems.

The **SMART Lexicon Manager** is a companion program to the **MAXit Checker** to manage the custom dictionaries. The program is designed for use by non-linguists. Two simple data entry screens let the user add AI linguistic inferences in seconds.

The key features of the **SMART Lexicon Manager** are on the right. The user must have a knowledge of English grammar and the subject matter terminology.

During data entry, the SMART AI rules guide, correct and prompt the user for multiple parts of speech, language variants, verb conjugations, abbreviations and noun plurals. Terms are added one-time.

### Lexicon Manager Versions

The *Enterprise Version* has functions to create reports and HTML dictionaries. The *LiTE Version* has the basic functions to manage dictionaries.



The *Dictionary Service Pack* is a subscription service to enter batches of 250 new terms. Our linguists encode the terms and return the updated dictionaries by email for immediate use.

### Knowledge Assets:

The custom dictionaries are the property of the client and become valuable company knowledge assets. Other uses include STEM training and AI prompts.

### Key Features

- A knowledge of linguistics is not required.
- Two versions, Enterprise and LiTE (basic).
- Two simple screens (see next page).
- Functions to Add, Delete, Change and Review.
- Prompts to add rules, example, noun used as verb.
- Synonyms have contextual suggestions.
- Entries are validated during term entry.
- Enterprise sharing of dictionaries in the Cloud.
- Management of multiple technical dictionaries.
- Linguistic tags added for machine intelligence.
- Phrase entries of 80 characters.
- Rules for exact match terms, example, MHz.
- Links to a synonym (reverse) dictionary.
- Style rules for proper nouns like ExxonMobil.
- Rules for irregular plurals, example, mouse, mice.
- Rules for British and American spelling.
- Rules for accurate verb conjugation.
- Adjectives with superlatives and comparatives.
- Tags for terms that can cause translation problems.
- Rules for abbreviations in long and short form.
- Rules for commands, signals and part names.
- Rules for the correct capitalization and spelling.
- Marks key words related to Product Liability.
- Rules for the control of multiple parts of speech.
- Links to **SMART Text Miner** for term harvesting.
- Ability to print HTML dictionaries and reports.
- Functions to import from lists and glossaries.
- Common format allows use inside **MAXit Checker** versions for Microsoft Word, PTC Arbortext, Adobe FrameMaker, XMetaL, Siemens Teamcenter and other publishing tools.
- Online user training is offered for a fast start.

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**SMART**  
COMMUNICATIONS, INC.  
[www.smartny.com](http://www.smartny.com)



Smart Communications, Inc.  
641 Lexington Ave, 13th Floor  
New York, NY 10022 USA  
Email: [info@smartny.com](mailto:info@smartny.com)  
Tel: +1 (212) 486-1894

## The SMART Dictionaries

Generalized grammar checkers, like Microsoft Word and Grammarly, use a stemming technique that is not suitable for engineering or technical information. The **SMART Lexicon Manager** uses two simple screens to add linguistic tags that add machine intelligence. All versions of the **MAXit Checker** use the same custom dictionaries. Our AI can distinguish between *pilot* fish, *pilot* relief valve and an airline *pilot*.

The image displays two overlapping windows from the SMART Lexicon Manager software. The background window is the 'TECHNICAL DICTIONARY SCREEN' with the title 'Add a term to a Technical Dictionary'. It contains fields for 'Technical Term' (with 'antenna control unit' entered), 'Word Use Rules' (with 'Type of Noun' set to 'Nomenclature'), and 'Part of Speech' (set to 'Noun'). It also has checkboxes for 'Noun', 'Verb Tenses', and 'Past Tense'. The foreground window is the 'SYNONYM DICTIONARY SCREEN' with the title 'Add a term to the Synonym Dictionary'. It has a 'Synonym' field (with 'lorry' entered), 'Part of Speech' (set to 'Noun'), and a list of 'MAXit Corrections' (1 to 6 choices) including 'truck' and 'tractor trailer'. A third, smaller window titled 'Lexicon Manager - Noun plural forms' is open over the first, showing options like '+s', '+es', and '(y) to ies'. Another window titled 'Lexicon Manager - MAXit Messages for Synonyms' is open over the second, listing various error types like 'ABBREVIATION - Wrong abbreviation' and 'TERMINOLOGY - Wrong term', with 'TERMINOLOGY - Wrong term' selected.

## Global Authoring Teams

The Enterprise Version manages dictionaries in the Cloud for collaborative authoring. The program can import terms from CAD and engineering glossaries.

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A key advantage of custom dictionaries is consistency and accuracy of terminology. Managed dictionaries avoid expensive *Quality Escapes* (failures).

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New York, NY 10022 USA

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