LanguageDataExporter

User Guide

Version 1.0.16

Language XML to Categorized Excel Converter
with VRS-based Story Ordering

Table of Contents

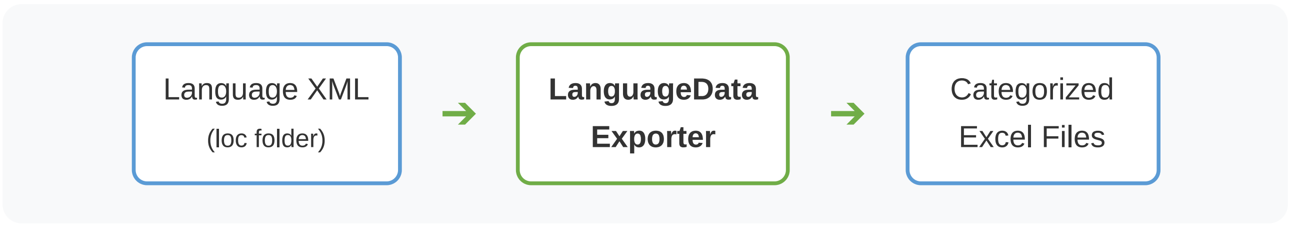
1. Quick Start

30-Second Workflow

1. Double-click `LanguageDataExporter.exe`
2. Click **Generate Language Excels** to create files

3. Find output in `GeneratedExcel/` folder

What It Does



Feature	Description	Output
Language Export	Convert XML to categorized Excel	`LanguageData_{LANG}.xlsx`
Word Count Report	LQA scheduling metrics	`WordCountReport.xlsx`
VRS Ordering	Chronological story order	Sorted STORY rows
Two-Tier Clustering	STORY + GAME_DATA categories	Color-coded cells

2. Installation

Requirements

Requirement	Details
OS	Windows 10/11
Disk Space	~50 MB
Network	Access to game data folders
Drive	Perforce sync on D:, E:, or F:

Installation Steps

1 **Download** - Get `LanguageDataExporter-Setup.exe` from GitHub Releases

2 **Run Installer** - Double-click and follow the prompts

3 **Configure Drive Letter**

Drive Configuration

On first launch, select your Perforce drive letter:

`F:` (Default) - Most common
`D:` or `E:` - Alternative drives

This sets paths to LOC, EXPORT, and VRS folders.

4 **Launch** - Double-click `LanguageDataExporter.exe`

Folder Structure

```
LanguageDataExporter/
├── LanguageDataExporter.exe ← Main application
├── settings.json ← Your drive configuration
├── category_clusters.json ← Category colors/keywords
├── GeneratedExcel/ ← Output folder
│   ├── LanguageData_ENG.xlsx
│   ├── LanguageData_FRE.xlsx
│   ├── WordCountReport.xlsx
│   └── _Summary.xlsx
└── _internal/ ← Python runtime
```

3. GUI Mode

Launch by double-clicking `LanguageDataExporter.exe`

Interface Layout

```
LanguageDataExporter

CONFIGURED PATHS
┌─────────────────────────────────────────────┐
│ LOC Folder:    F:\perforce\...\loc       [OK] │
│ EXPORT Folder: F:\perforce\...\export__ [OK] │
│ Output Folder: GeneratedExcel          [OK] │
└─────────────────────────────────────────────┘

EXPORT ACTIONS
[Generate Word Count Report]  [Generate Language Excels]
```

GUI Actions

Button	What It Does	Output
Generate Word Count Report	Creates LQA metrics report	`WordCountReport.xlsx`
Generate Language Excels	Creates all language files	`LanguageData_*.xlsx`

4. CLI Mode

Basic Commands

```
# Run with GUI (default)
python main.py

# Run in CLI mode
python main.py --cli

# Process specific languages
python main.py --cli --lang eng,fre,ger

# Generate word count report
python main.py --cli --word-count

# Preview without writing files
python main.py --cli --dry-run

# Show category distribution
python main.py --list-categories
```

CLI Arguments Reference

Argument	Description	Example
`--cli`	Run in command-line mode	`--cli`
`--lang`	Process specific languages	`--lang eng,fre`
`--word-count`	Include word count report	`--word-count`
`--word-count-only`	Only generate word count report	`--word-count-only`
`--dry-run`	Preview without writing	`--dry-run`
`--list-categories`	Show category distribution	`--list-categories`

`--output`	Custom output folder	`--output D:\Out`
`-v`	Enable debug logging	`-v`

5. Category System (THE ALGORITHM)

This section explains the **complete category clustering algorithm** - the core logic that determines which category each string belongs to.

This is the Most Important Section!
Understanding the algorithm helps you predict exactly which category any file will be assigned to.

Algorithm Overview

```
CATEGORY CLUSTERING ALGORITHM

INPUT: File path from EXPORT folder

STEP 1: DETERMINE TIER
  Is file in Dialog/ or Sequencer/ folder?
    YES → TIER 1 (STORY) → Folder-based categorization
    NO → TIER 2 (GAME_DATA) → Two-phase keyword matching

STEP 2A: TIER 1 - STORY
  Sequencer/ → Sequencer
  Dialog/AIDialog/ → AIDialog
  Dialog/QuestDialog/ → QuestDialog
  Dialog/NarrationDialog/ → NarrationDialog

STEP 2B: TIER 2 - GAME_DATA (Two-Phase)
  PHASE 1: PRIORITY KEYWORDS (checked FIRST!)
    gimmick → Gimmick | item → Item | quest → Quest
    skill → Skill | character → Character
    region → Region | faction → Faction
    IF MATCH FOUND → RETURN IMMEDIATELY

  PHASE 2: FOLDER + KEYWORD PATTERNS
    (Only if Phase 1 didn't match)

OUTPUT: Category name
```

Step 1: Tier Classification

Top-Level Folder	Tier	Processing Method
`Dialog/`	TIER 1 (STORY)	Subfolder determines category
`Sequencer/`	TIER 1 (STORY)	All files → Sequencer
`System/`	TIER 2 (GAME_DATA)	Two-phase keyword matching
`World/`	TIER 2 (GAME_DATA)	Two-phase keyword matching
`None/`, `Platform/`	TIER 2 (GAME_DATA)	Two-phase keyword matching

Step 2A: TIER 1 - STORY Categories

STORY content uses simple folder-based categorization and is sorted chronologically using VRS.

Folder Path	Category	Color	Ordering
`Sequencer/*.loc.xml`	🟨 **Sequencer**	Light Orange	VRS chronological
`Dialog/AIDialog/*.loc.xml`	🟩 **AIDialog**	Light Green	VRS chronological
`Dialog/QuestDialog/*.loc.xml`	🟩 **QuestDialog**	Light Green	VRS chronological
`Dialog/NarrationDialog/*.loc.xml`	🟩 **NarrationDialog**	Light Green	VRS chronological
`Dialog/StageCloseDialog/*.loc.xml`	🟩 **QuestDialog** (mapped)	Light Green	VRS chronological

Step 2B: TIER 2 - GAME_DATA Two-Phase Matching

This is the core algorithm for non-story content. It uses two phases, checked in order.

PHASE 1: Priority Keywords (CHECKED FIRST!)

CRITICAL: Priority keywords **completely override** folder location!

A file named `KnowledgeInfo_Item.xml` in the `Knowledge/` folder will be categorized as **Item**, not Knowledge, because "item" is found in the filename.

The algorithm extracts the filename and checks if it contains any priority keyword. **First match wins and immediately returns.**

Priority	Keyword	Category	Example Match
1	`gimmick`	**Gimmick**	`gimmickinfo_item_book` → Gimmick
2	`item`	**Item**	`KnowledgeInfo_Item` → Item
3	`quest`	**Quest**	`characterinfo_quest` → Quest
4	`skill`	**Skill**	`factioninfo_skill` → Skill
5	`character`	**Character**	`npcinfo_character` → Character
6	`region`	**Region**	`uiinfo_region` → Region
7	`faction`	**Faction**	`uiinfo_faction` → Faction

Matching is SUBSTRING-based and CASE-INSENSITIVE
"item" matches: `Item`, `item`, `KnowledgeInfo_Item`, `itemequip`

PHASE 2: Standard Patterns (Only if Phase 1 didn't match)

Match Type	Pattern	Category	Color

Folder	`lookat/`, `patterndescription/`	🟪 **Item**	Light Purple
Keyword	`weapon`, `armor`	🟪 **Item**	Light Purple
Folder	`quest/`	🟪 **Quest**	Light Purple
Keyword	`schedule_`	🟪 **Quest**	Light Purple
Folder	`character/`, `npc/`	🟧 **Character**	Light Peach
Keyword	`monster`, `animal`	🟧 **Character**	Light Peach
Folder	`skill/`	🟪 **Skill**	Light Purple
Folder	`knowledge/`	🟪 **Knowledge**	Light Purple
Folder	`faction/`	🟪 **Faction**	Light Purple
Folder	`ui/`	🟩 **UI**	Light Teal
Keyword	`localstringinfo`, `symboltext`	🟩 **UI**	Light Teal
Folder	`region/`	🟧 **Region**	Light Peach
(default)	(no match)	⬜ **System_Misc**	Light Grey

Algorithm Walkthrough Examples

Example 1: File with "Item" keyword in Knowledge folder

`World/Knowledge/KnowledgeInfo_Item.xml`

Step 1: Top folder is "World/" → TIER 2 (GAME_DATA)
Step 2B Phase 1: Check "knowledgeinfo_item"
- "gimmick"? NO
- "item"? **YES** → **RETURN "Item"**

Result: Item (NOT Knowledge!)

Example 2: Gimmick file with multiple keywords

`System/Gimmick/gimmickinfo_item_book.xml`

Step 1: Top folder is "System/" → TIER 2 (GAME_DATA)
Step 2B Phase 1: Check "gimmickinfo_item_book"
- "gimmick"? **YES** → **RETURN "Gimmick"**

(Note: "item" is also present but gimmick is checked FIRST)

Result: Gimmick (gimmick has HIGHEST priority)

Example 3: File with no priority keywords

`World/Knowledge/KnowledgeBase.xml`

Step 1: Top folder is "World/" → TIER 2 (GAME_DATA)
Step 2B Phase 1: Check "knowledgebase"
- gimmick? NO | item? NO | quest? NO | skill? NO
- character? NO | faction? NO | region? NO
- No match → Continue to Phase 2

Step 2B Phase 2: Check folder patterns
- "knowledge/" in path? **YES** → **RETURN "Knowledge"**

Result: Knowledge

Priority Keyword Conflict Resolution

When a filename contains **multiple** priority keywords, the **first match in priority order wins**:

Filename	Contains	Winner	Why
`gimmickinfo_item_book`	gimmick, item	**Gimmick**	gimmick is priority 1
`characterinfo_quest`	character, quest	**Quest**	quest is priority 3, character is 5
`skillinfo_faction`	skill, faction	**Skill**	skill is priority 4, faction is 7

Golden Rules Summary

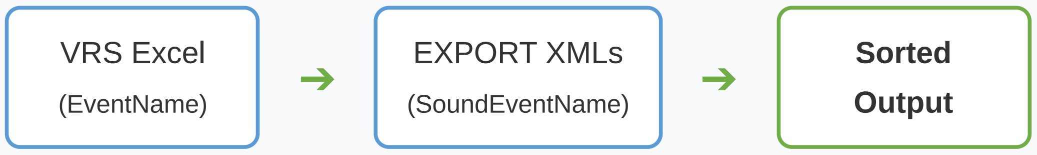
Rule	Explanation
Tier First	Dialog/Sequencer → STORY, everything else → GAME_DATA
Priority Keywords Win	Phase 1 keywords override ALL folder matching
Gimmick is #1	"gimmick" in filename → always Gimmick category
Order Matters	Priority keywords checked in specific order (1-7)
Substring Match	Keywords match anywhere in filename (case-insensitive)
Knowledge is Catch-All	Only matches if NO priority keyword found

6. VRS Ordering

What is VRS?

VoiceRecordingSheet (VRS) is the master Excel file containing all voiced lines in chronological story order. LanguageDataExporter uses VRS to sort STORY content so LQA reviewers see dialogue in the order players experience it.

How It Works



Step	Action	Result
1	Load VoiceRecordingSheet.xlsx	Read EventName from Column W
2	Scan EXPORT XMLs	Extract SoundEventName attribute
3	Match StringID to EventName	Build ordering map
4	Sort STORY entries	Chronological story order!

Result: STORY strings appear in Excel in **chronological story order**. LQA reviewers see content as players experience it.

7. Word Count Reports

Report Purpose

Use Case	How It Helps
Schedule Work	Estimate LQA time based on word counts
Track Progress	Compare counts across languages
Find Untranslated	Identify strings still containing Korean

Counting Method

Language Type	Method	Languages
European/SEA	Word count	ENG, FRE, GER, SPA, POR, ITA, RUS, TUR, POL, THA, VIE, IND, MSA
CJK	Character count	JPN, ZHO-CN, ZHO-TW

Untranslated Detection

A string is marked **untranslated** if the translation still contains Korean characters (Unicode U+AC00-U+D7A3).

Example: `"Hello 안녕"` → Marked as untranslated

8. Output Files

Language Excel Files

Filename: `LanguageData_{LANG}.xlsx`

Column	Width	Description
StrOrigin	45	Korean source text
Str	45	Translated text
StringID	15	Unique identifier
English	45	English reference (EU languages only)
Category	20	Color-coded category

Note: CJK languages (JPN, ZHO-CN, ZHO-TW) don't include the English column.

9. Troubleshooting

Issue	Cause	Solution
Path NOT FOUND	Wrong drive letter	Edit `settings.json` or run `drive_replacer.py`
No language files	LOC folder empty	Check Perforce sync status
VRS not loaded	Missing VRS folder	Verify VRS path in settings
Empty output	No .loc.xml files	Check EXPORT folder exists
Wrong category	Priority keyword conflict	Check filename for keywords

Debug Mode

Run with `-v` flag for detailed logging:
`python main.py --cli -v`

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GitHub Repository