

1. Document Setup and Purpose

1.1 Document Identification

Field	Detail
Document Title	ASL Gloss Technical Reference & Guideline
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1.2 Introduction and Purpose

The primary goal of this document is to serve as the **authoritative linguistic guide** for the LLM translation and validation processes.

This guide clarifies the specific **authentic ASL grammar and structure** required in the translation output. These rules form the basis for evaluating the quality of translations generated by new Large Language Models (LLMs) during the research phase.

- **Source Authority:** The rules and standards detailed herein are derived directly from the **Claude LLM System Prompt**. This Prompt represents the project's established linguistic standard for high-quality ASL Gloss.
- **Target Audience:** LLM Team (Adeola & Sepid), who generate the translations, and the ASL Validation Team (Somaia & Luisa), who assess them.

1.3 Document Structure

This document is organized into two main sections to provide a systematic understanding of the required ASL Gloss notation:

1.3.1 CORE Rules (Structural Integrity)

This section details the fundamental, mandatory rules for maintaining **syntactic integrity** in ASL Gloss translations. These rules are essential for the model's output to be recognized as grammatically correct ASL, rather than simply English words in sequence. This section covers:

- The **Time-Topic-Comment (TTC)** structure, which mandates the order of concepts in ASL sentences.
- The required **Omission** of English linking verbs and articles to reflect ASL's linguistic economy.
- The mandatory use of **ALL CAPS** for all Gloss signs.

1.3.2 ADVANCED Grammar (Linguistic Detail)

This section delves into the complex, crucial markers that must be included to achieve high-fidelity, unambiguous ASL translations. These markers provide linguistic depth and context, which are vital for validation. This section clarifies the correct usage of:

- **Non-manual Markers (NMMs)**, such as `_q` (Yes/No questions) and `_wh` (WH-questions), which convey sentence type.
 - **Index (IX) signs** (e.g., IX-me, IX-you) to represent pronouns.
 - **Directional Verbs** and **Classifiers (CL:)**, which are used to describe movement, shape, and spatial relationships in ASL.
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2. CORE Rules: Structural Integrity

This section details the fundamental and mandatory rules for maintaining **syntactic integrity** in ASL Gloss translations. These rules are essential for the LLM output to be recognized as grammatically correct ASL, rather than simply English words in sequence.

2.1 Time-Topic-Comment (TTC) Structure

The TTC structure dictates the mandatory word order in ASL and must override the English sentence structure.

Rule Name	Detailed Explanation for LLM Team	Example (from System Prompt)
TTC Mandatory Order	ASL sentences must strictly adhere to the [TIME] [TOPIC] [COMMENT] pattern. Time markers (if present) always come first, followed by the Topic, which is then followed by the Comment (the action or description).	English: "Last week I bought a new house." ASL: LAST-WEEK HOUSE NEW _t, IX-me BUY

Topic Establishment	The main subject of the sentence (the Topic) must be clearly identified and often marked with the non-manual marker <u>_t</u> (raised eyebrows, subtle head tilt) to establish context for the Comment.	English: "The red car is fast." ASL: CAR RED <u>_t</u> , FAST
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2.2 Omission of Non-Essential English Words

ASL is an economic language that omits words considered redundant. The LLM must adhere to these omission rules.

Rule Name	Detailed Explanation for LLM Team	Example Rationale
Omit Articles	Articles (a, an, the) must be omitted from the Gloss output. The context of the signs naturally conveys whether the noun is definite or indefinite.	English: "I have a car." \$\\rightarrow\$ ASL: IX-me CAR HAVE
Omit Linking Verbs	Linking verbs (e.g., am, is, are, was, were) must be omitted when the meaning is clear through the sign sequence.	English: "The car is red." \$\\rightarrow\$ ASL: CAR RED <u>_t</u> , RED

2.3 Formatting and Case

Rule Name	Detailed Explanation for LLM Team
ALL CAPITAL LETTERS	All signs and words used in the ASL Gloss output must be written in CAPITAL LETTERS . This ensures consistent recognition as Gloss signs and distinguishes them from accompanying NMMs.

Punctuation

Punctuation is used to indicate grammatical breaks or the end of a thought group, not traditional English punctuation.