

The Human-Layer Security Handshake Protocol: Mitigating the Mutual Greeting Misalignment Sasophy via Out-of-Band Negotiation

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Abstract

Social synchronization remains a critical bottleneck in human-to-human interaction and presents as a sasophy¹ that can occur on a daily basis. A frequent failure state during this transaction, known as Mutual Greeting Misalignment (MGM), or "L" state, occurs when two agents attempt different greeting procedures upon establishing a connection. This paper introduces the Human-Layer Security (HLS) Handshake Protocol, a robust framework designed to settle on a common Greeting Cipher Suite before physical proximity is achieved. By utilizing a pre-contact signaling phase, HLS ensures 99.999% social up-time and prevents the catastrophic bruh moment and vibe-check cache miss [3].

1. Introduction

Traditional human greetings rely on heuristic-based prediction models, which can be essentially "guessing" based on historical metadata stored in the Long-Term Memory Cache. It has been observed in other works that key-exchange is an effective solution when the Time Since Last Contact (TSLC) is minimal. However, as TSLC increases, the reliability of these cached preferences decays exponentially, leading to vibe-check cache misses. This problem is further exacerbated when agents have not interacted before and are internationalized differently. It is important to recognize that socialization now operates on a global scale, and what is normal in one culture can be considered odd in another. Therefore, a framework is necessary to establish a culturally invariant standard.

The HLS Handshake is modeled after the Transport Layer Security (TLS) protocol. Without it, agents often enter a state of social panic, resulting in greeting error codes and social packet-loss. Similarly to TLS, HLS has built-in security measures to defend against common vulnerabilities such as man-in-the-middle attacks, which remain a common method for network hijacking [2]

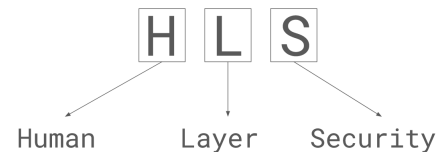


Figure 1. Breakdown of the HLS Protocol

2. Background

There are multiple acceptable greetings in use today. The following provides a not-exhaustive list of standard greeting procedures observed within the last decade.

- Handshake
- Hug
- Side hug
- Fist bump
- Dap
- Southern Dap
- Chi-town Dap
- Dab pull-in
- Cheek Kiss
- High-five
- Just say "Hi"
- Finger Gun
- Up-nod
- Down-nod
- Updog
- Nothing

3. Method

Some greetings are more popular than others, and popularity tends to vary depending on geographical location and age of the user. Therefore, even the first version of HLS supports multiple languages and condenses international systems to their culturally-invariant counterparts [1].

4. Architecture

The HLS Protocol follows a strictly defined four-way handshake to establish a Secure Socket Layer.

Phase 1: Optical Ping

¹ <https://www.urbandictionary.com/define.php?term=sasophy>

Agent A (the client) initiates the connection to Agent B (the server) by establishing visual line-of-sight and transmitting a verbal SYN signal. The default signal is "yo, what's good?".

Phase 2: Server Response & Cipher Suite Selection

The server acknowledges the connection and provides a list of supported greeting ciphers. Supported cipher codes can include:

- HLS_DAP_WITH_PULL_IN
- HLS_FORMAL_FIRM_GRIP
- HLS_HUG_FULL_CONTACT
- HLS_SHORT_WAVE

among others.

Phase 3: Key Exchange

Both agents negotiate the physical distance (d) and velocity (v) required for the selected greeting. During this phase, if the client detects a "handshake" intent but only supports "dap" they may issue an HLS_REJECT, effectively acting as a firewall.

Phase 4: Execution

The greeting is performed. If the checksum matches, the session is established. Any deviation at this stage triggers a fatal alert.

5. Testing

To test HLS, we monitored a test subject over the course of 6 months as they experienced over 200 social interactions. To facilitate a well-formed data set, we ensured that the test subject spent time at work, the gym, walking at the park, and attending various meet-up events throughout the city. For the first 3 months, the subject was to proceed with interactions as normal, without the use of any pre-contact signaling. Then, the subject was instructed to implement HLS for the last 3 months of the study. Figure 2 shows the results obtained during this period.

Metric	No HLS	HLS
L Rate	25.92%	1.14%
Mean Latency (seconds)	3.4	1.8
Incidents (per day)	7	0
Perception	Chopped	Baddie

Figure 2. HLS interaction result presented in an obfuscated, yet ultimately legible manner.

6. Result

We have shown that the HLS protocol is extremely effective in reducing the occurrence of bruh moments and drasti-

cally improves the chances of passing vibe checks. Coincidentally, it was also observed from Figure 3 that the average number of interactions per day took a nosedive, particularly after the HLS protocol was mandated for interaction, and the test subject was put on a PIP shortly after. Further research is necessary to determine whether there is a causal link between the events. Regardless, we fully expect HLS to be vertically integrated into all levels of societal interaction.

Number of Recurring Social Interactions vs. Days Since HLS

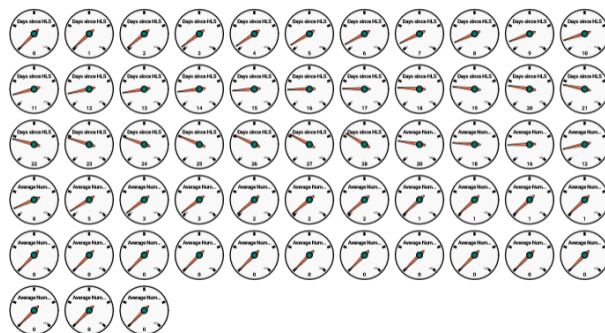


Figure 3. Number of social interactions presented in an obfuscated, yet ultimately legible manner.

7. Future Work

The flexible architecture of the HLS protocol allows it to be adapted for other common sasophies, such as, but not limited to: crossing paths in a narrow hallway or reaching for the last gallon of milk on the shelf.

References

- [1] Alessandro Duranti. 2008. Universal and Culture-Specific Properties of Greetings. In *Journal of Linguistic Anthropology*, June, 2008.
- [2] Keiichiro Kimura et al. 2023. A New Approach to Disabling SSL/TLS: Man-in-the-Middle Attacks are still Effective. In *2023 Eleventh International Symposium on Computing and Networking (CANDAR)*, 2023.
- [3] Paula Melissa et al. 2024. Sociolinguistic Study: Variation Of Slang Words Between Gen Z And Gen Alpha. In *Philosophica Vol. 7, December, 2024*.