

Frogans Address Composition Rules - 1.1

Abstract

This document sets forth version 1.1 of the composition rules applicable to Frogans addresses. Compared to version 1.0, version 1.1 simplifies the method for checking whether two valid site names are convergent. Composition rules focus on security and manage language-related issues. They are enforced at the time Frogans addresses are registered in the Frogans Core Registry (FCR).

Status

This document is an official technical specification of the Frogans technology.

This technical specification was adopted by the OP3FT on June 28, 2022.

Comments on this document are welcome and may be made on the Frogans technology mailing lists, accessible at the following permanent URL: <https://lists.frogans.org/>.

Location

This document is accessible at the following permanent URL: <https://www.frogans.org/en/resources/facr/access.html>.

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1. Introduction

1.1. Background

Started in 1999, the Frogans project aims to introduce a new medium for publishing content and services on the Internet, called Frogans.

From a technical standpoint, this new medium is designed as a new generic software layer running on top of the original Internet infrastructure, i.e. the TCP and IP protocols and the Domain Name System (DNS), alongside other existing generic software layers such as E-mail or the World Wide Web.

Frogans as a medium is intended for publishing Frogans sites. A Frogans site is made up of free-form pages called Frogans slides which are interconnected.

The technology making up the new medium, i.e. the Frogans technology, involves composition rules applicable to Frogans addresses. Frogans addresses serve as the identifiers of Frogans sites and are

registered in a central database, called the Frogans Core Registry (FCR).

The composition rules applicable to Frogans addresses focus on security and manage language-related issues by introducing the concepts of linguistic categories and convergence forms. These composition rules are enforced at the time Frogans addresses are registered in the FCR.

The composition rules applicable to Frogans addresses were initially defined in version 1.0 of the Frogans Address Composition Rules (FACR) specification [FACR10].

In these composition rules, the method for checking whether two valid site names are convergent was unnecessarily complex, which resulted in significant implementation overhead. The method was complex because in its final tests, the method considered convergence forms of overlapping linguistic categories.

1.2. Purpose

The purpose of this document is to set forth version 1.1 of the composition rules applicable to Frogans addresses. Compared to version 1.0, version 1.1 simplifies the method for checking whether two valid site names are convergent.

The new method for checking whether two valid site names are convergent must no longer consider convergence forms of overlapping linguistic categories.

Version 1.1 must retain all the other rules defined in version 1.0.

Version 1.1 does not add any new linguistic categories, modify the employable characters and arrangement rules of the existing linguistic categories, modify or add a type of Intra-LC convergence form, nor modify the type of the Inter-LC convergence form.

Given that the changes between version 1.0 and version 1.1 are limited to a single specific method and that all the other rules are left unchanged, it was decided that this document must only include the description of the new method and must not repeat descriptions that have not changed and are available in the FACR 1.0 specification [FACR10], such as terminology, new concepts, unchanged methods, and appendices.

All the appendices of the FACR 1.0 specification, which provide assistance in implementing composition rules, can still be used for implementing version 1.1 of the composition rules.

1.3. Intended Audience

This document is intended for those involved in the Frogans address registration process, such as Frogans address holders, FCR account administrators, and the Operator of the Frogans Core Registry (FCR).

For example, Frogans address holders can use this document to understand the composition rules applicable to their Frogans addresses.

This document is also intended for developers wishing to implement software related to Frogans address registration, and in general for anyone interested in the security model underpinning the addressing system used for Frogans sites.

1.4. Compliance

The rules in this specification are defined in succession. The definition of each rule assumes compliance with all preceding rules.

A conforming implementation of this specification is an implementation which is compliant with all descriptions appearing in this document.

Hence, unlike in Request for Comments drawn up by the Internet Engineering Task Force (IETF), requirement levels in this specification are not indicated using key words such as "MUST", "MUST NOT", "SHOULD", and "SHOULD NOT" defined in RFC 2119 [RFC2119] and RFC 8174 [RFC8174]. This applies to all specifications drawn up by the OP3FT.

In this document, normative and informative references detailed in the References section appear between square brackets [].

2. Rules imported from FACR 1.0

Version 1.1 of the composition rules applicable to Frogans addresses imports all the rules defined in the FACR 1.0 specification [FACR10], except for the method for checking whether two valid site names are convergent (see FACR 1.0, section 9. Checking Whether Two Valid Site Names are Convergent).

In version 1.1 of the composition rules, the method for checking whether two valid site names are convergent is described in Section 3 of this document.

3. Checking Whether Two Valid Site Names are Convergent

This section describes the method for checking whether two valid site names are convergent. It is assumed in this section that the two valid site names are used with a common valid network name that is associated with a linguistic category.

The method does not check the convergence of two valid site names that are used with different valid network names or that are associated with different linguistic categories.

The method takes the following values as input:

- * LC: the linguistic category
- * NN: the common valid network name for LC
- * SN1: the first valid site name used with NN
- * SN2: the second valid site name used with NN

The method consists of performing the following tests in succession until it has been determined whether or not SN1 and SN2 are convergent:

- A. If SN1 and SN2 are identical according to the IFAP specification [IFAP], then SN1 and SN2 are convergent.
- B. Otherwise, two cases can arise:
 1. If there is an Intra-LC convergence form type of LC where the Intra-LC convergence form values of SN1 and SN2 are the same, then SN1 and SN2 are convergent.
 2. Otherwise, SN1 and SN2 are not convergent.

4. References

4.1. Normative References

- [FACR10] OP3FT, "Frogans Address Composition Rules", Version 1.0, ISBN 978-2-37313-001-0, December 2014, <<https://www.frogans.org/en/resources/facr/access.html>>.
- [IFAP] OP3FT, "International Frogans Address Pattern", Version 1.1, ISBN 978-2-37313-000-3, November 2014, <<https://www.frogans.org/en/resources/ifap/access.html>>.

4.2. Informative References

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, DOI 10.17487/RFC2119, March 1997, <<https://www.rfc-editor.org/info/rfc2119>>.
- [RFC8174] Leiba, B., "Ambiguity of Uppercase vs Lowercase in RFC 2119 Key Words", BCP 14, RFC 8174, DOI 10.17487/RFC8174, May 2017, <<https://www.rfc-editor.org/info/rfc8174>>.

