



**GOUVERNEMENT**

*Liberté  
Égalité  
Fraternité*

**Pôle d'Expertise de la Régulation  
Numérique - PEReN**

# PEReN

A state-of-the-art centre of expertise for digital platform regulators

# PEReN, a French government pole of digital expertise

## Why PEReN?

Facing the challenges of digital platforms regulation:

- **overcome the strong asymmetries** of information between regulators and regulated;
- **capitalize rare skills and tools** that can be mobilized by providing public authorities with cutting-edge technical expertise;
- **strengthen France's action** in the field of digital regulation;
- **consolidate the government's dialogue** with digital platforms;
- **coordinate public action on a technical level**, without interfering with any authority independence nor decision making process.

2020

31 August

Decree of creation of PEReN

2021

25 October

Promulgation of the law on the regulation and protection of access to cultural works in the digital age. Its article 36 consolidates the intervention framework of the PEReN

2022

21 April

Decree consolidating the intervention framework of PEReN

## A team of 20 high-level experts





## What PEReN is not



a tech company



a policy team



a regulator



a standardization body



## ...but it



develops state of the art tools



does exploratory or academic research



is a regulation backoffice providing expertise and analysis



analyses legal initiatives and future norms

## Working with



# Efficient design for effective interoperability?

- Safeguard the interoperability principle from article 7 of the DMA from adversarial approaches,
- GTK should not be able to benefit from interoperability obligations to strengthen their data collection,
- GTK should be prevented from using dark patterns / disclaimers to alter the user experience on the other side / discourage from i14y.

## Play Protect warning



Testing App

This app can damage your device, add hidden charges to your mobile bill, or steal your personal information.

OPEN ANYWAY UNINSTALL

Warning example (Google's Play Protect)

<https://android-developers.googleblog.com/2019/02/google-play-protect-in-2018-new-updates.html>

Let's go over a typical user journey in a world with i14y.

# Identity reconciliation across services

2 options : user-based or discussion-based.

Should exchange tokens, minimize the exposure of PII (Oauth-like schemes?)

## User/Identity-based

- Link together a GTK profile and another platform profile,
- In practice, GTK builds a shadow profile and increase social graph coverage from the i14y with smaller platform,
- Cf. Meta/Facebook shadow profiles.

## Discussion-based

- Each time a new discussion is made i14y, users go through an « invite by one-time link » scheme and the apps generate one-time tokens/identifiers,
- Smaller platforms would have to be able to manage many aliases by users.

User consent to i14y : Opt-in / opt-out ? per platform / per user / per channel ?

# Discoverability

## Discoverability from small platform side :

- GTK should make its discoverability API i14y after consent (opt-in/opt-out)
- Discoverability API should also minimize the exposure of PII (e.g. hash-based)

## Discoverability from GTK side :

- Handling consent? → « Invite by one-time link »?
- Bridging groups across platforms
  - How to handle group consent?
    - Create a new group each time a new platform is added? (to ensure ToS / privacy consent)
  - Is it supposed to bridge groups together? To include individuals users in GTK groups?
    - **UX should be a full group experience across platforms!**

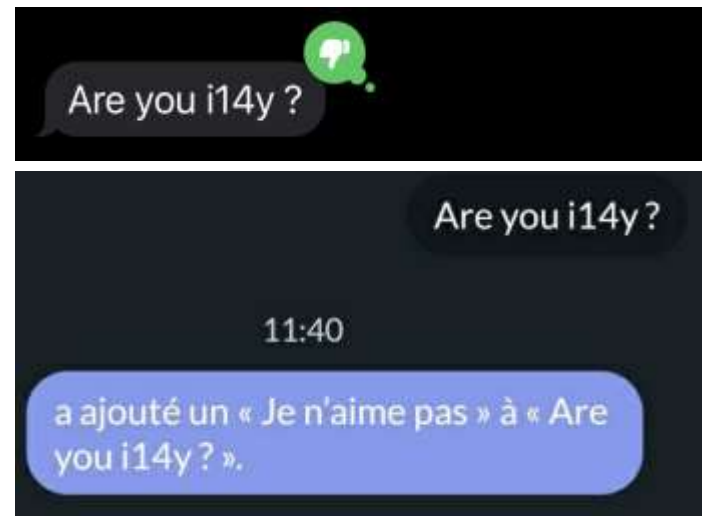
# Letting user send texts across platforms

What is a text message? Is it to be understood in terms of what:

- is displayed => only text messages per se,
- is transmitted => emoji reactions would fall into this category.

What is included in i14y or a differentiating feature?

- Emoji reactions,
- « Is typing » indicator,
- Ephemeral messages,
- Stickers.



Emoji reaction iMessage / Android

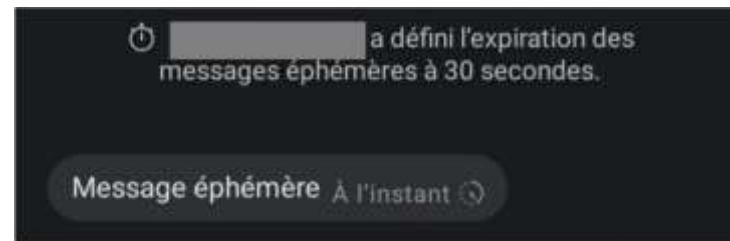
# Quality of Service

- GTK might derive sophisticated technological schemes to pack as much bits of information as possible in IP packets.
  - Smaller platform should be able to choose to either interconnect with the same QoS as GTK (provided additional technical developments on their side) or with a standard / easy to implement approach (might not be as efficient).
  - **Therefore QoS impact of i14y should only be limited by the smaller platform implementation.**
- **Voice/video calls QoS will be essential**
  - codecs are at the heart e.g. Nvidia proprietary codecs for deepfake/video compression.
  - GTK should provide smaller platform with a free of charge license for codec required to interconnect with the same QoS, limited to the interconnection purpose.
- PEReN is building tools to benchmark various situations e.g. calls, messages in degraded network conditions.

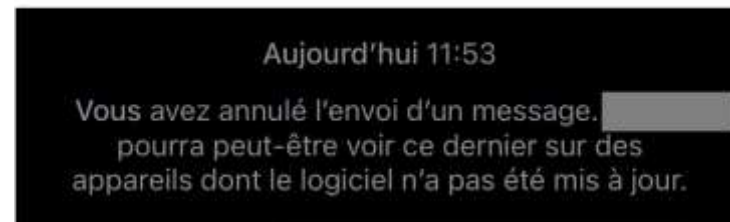


# Security

- Security goes beyond E2E
  - built-in features to validate other user identity/keys etc. should be made i14y,
  - ephemeral messages, erasing messages are also security features on top of regular messages and should be preserved across i14y,
- Moderation and abuse is a different matter from i14y but this would be a great opportunity to build standardized means of flagging/reporting.



Ephemeral messages



Erasing messages

# Thank you / Questions ?

Reach out to us !

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Annual report / info

<https://www.peren.gouv.fr/>

