

VALIDATION OF DIFFERENT CALL EVENTS

TO ENHANCE FRAUD DETECTION



VOICE FRAUD TYPES AND LOSSES

CLI SPOOFING \$ 2,6 B

PBX HACK \$ 3,6 B

INTERCONNECT BYPASS \$ 3,1 B

SPAM, PHISHING \$ 3.24 B

WANGIRI \$ 1,8 B

FAS + IRSF \$ 6,7 B

OTT BYPASS ?

CALL STRETCHING ?

* CFCA

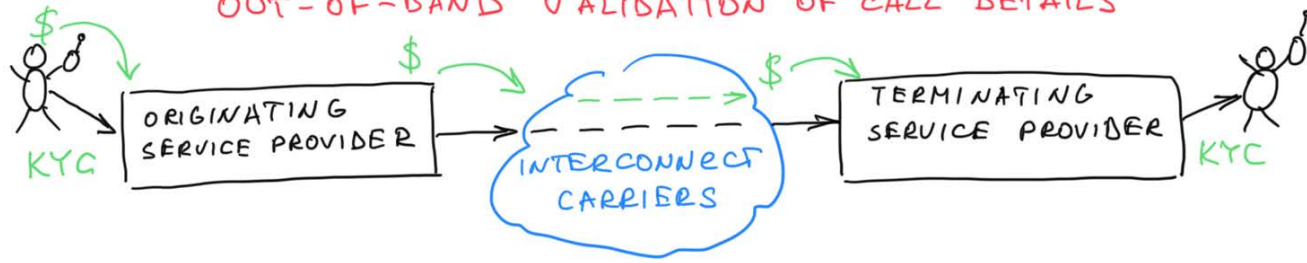
OUT-OF-BAND VALIDATION OF CALL DETAILS

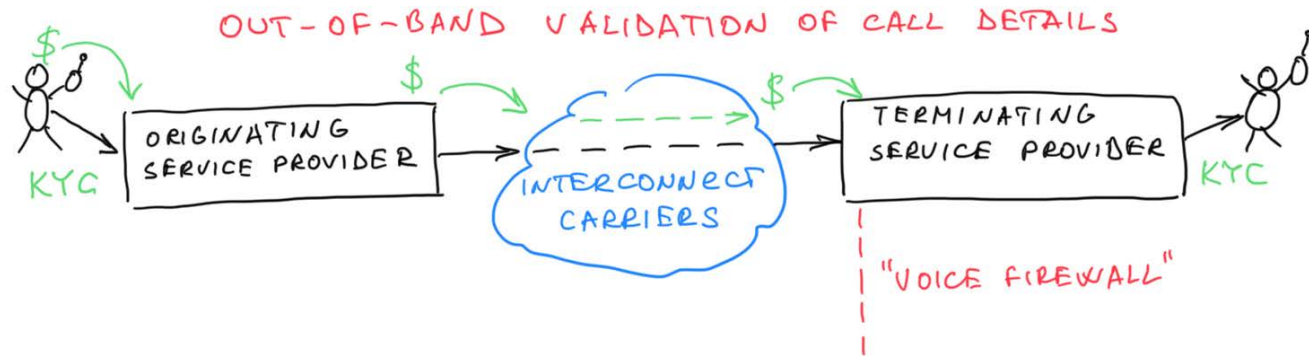


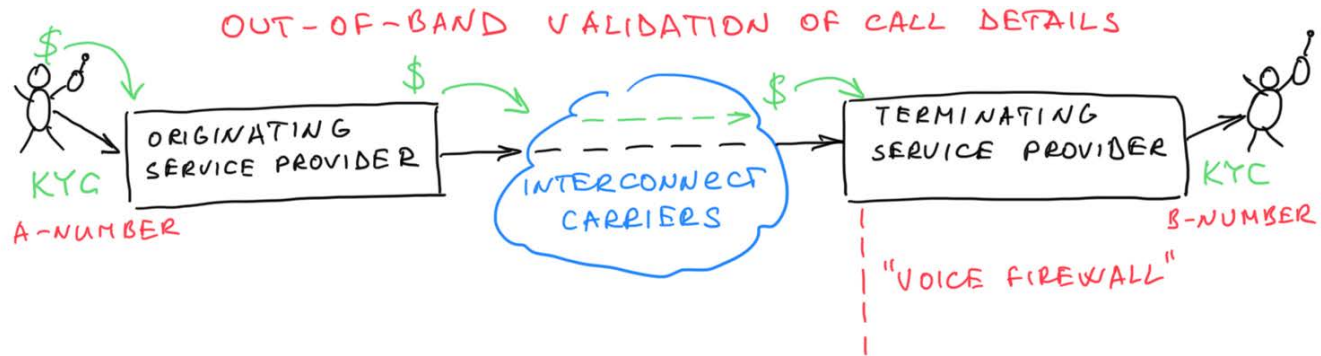
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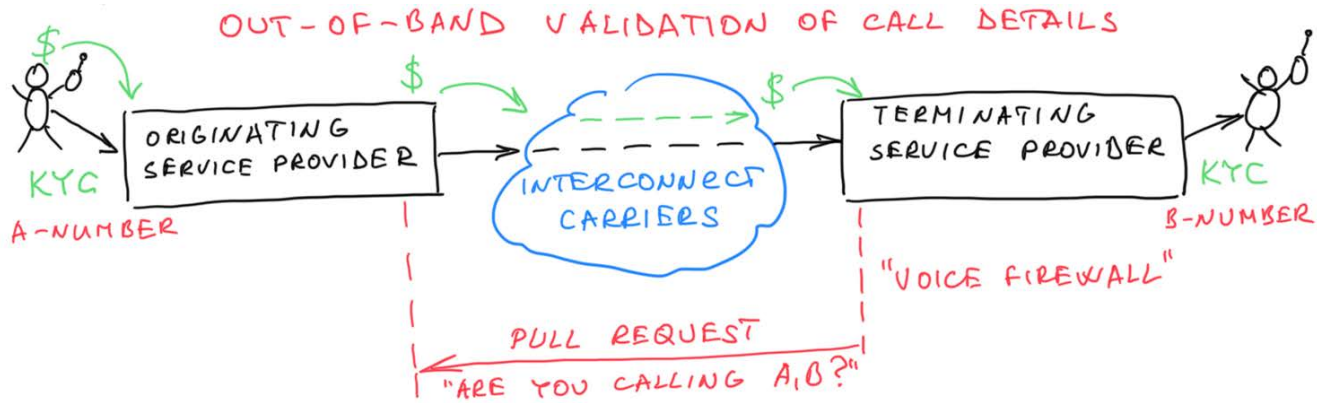


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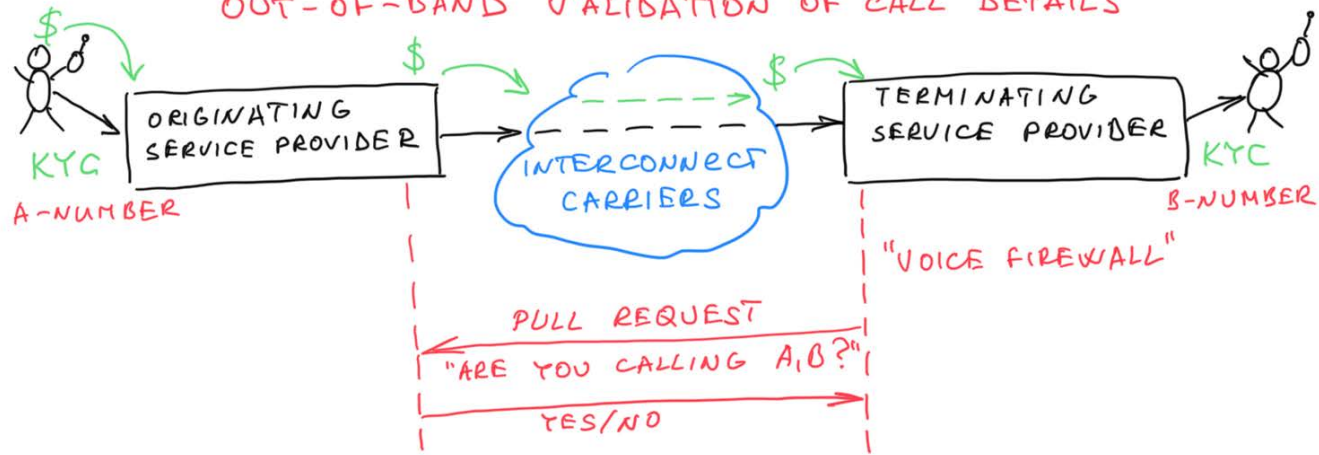




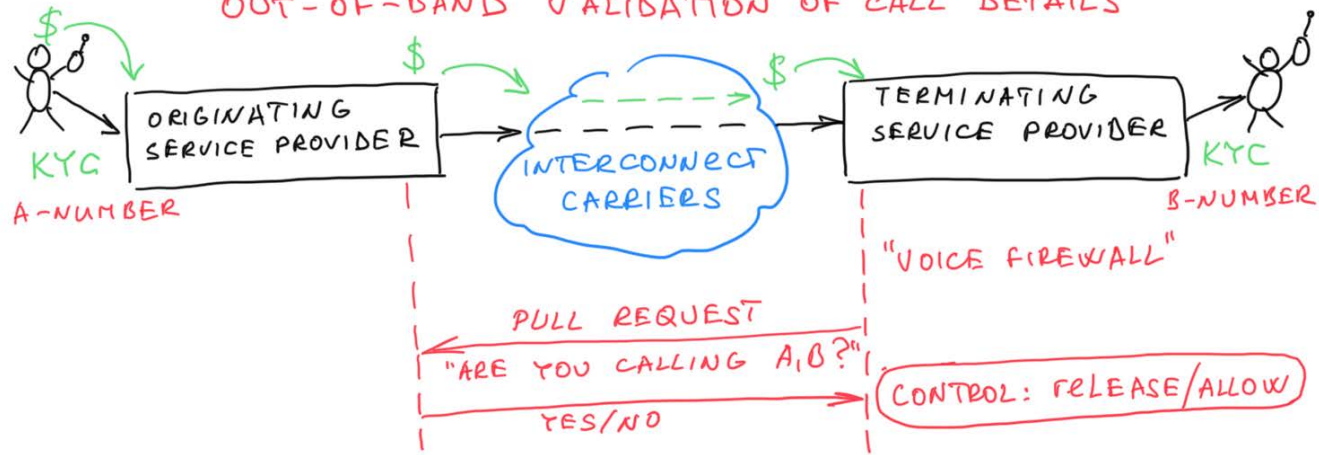




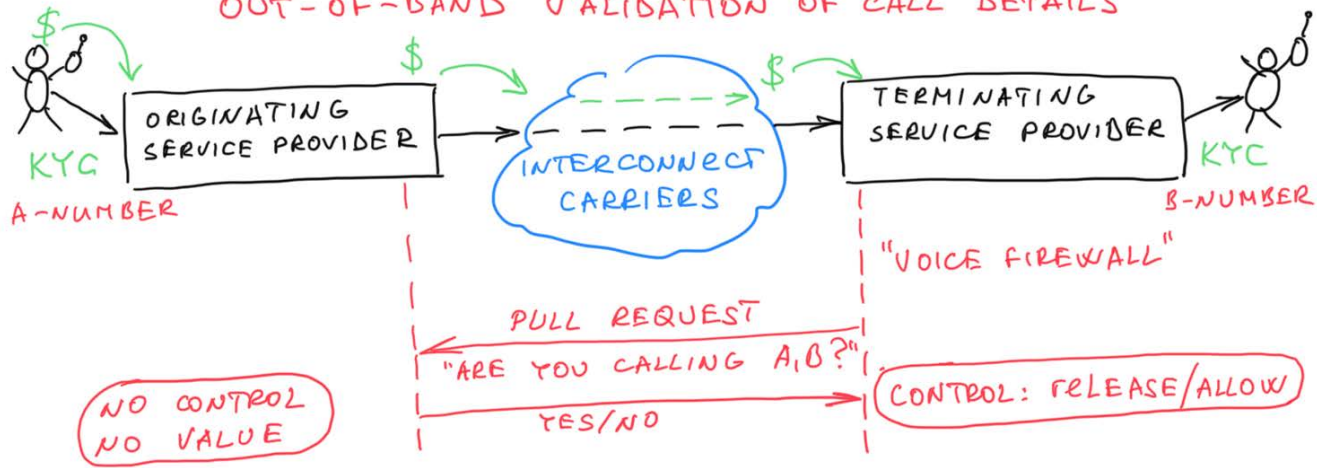
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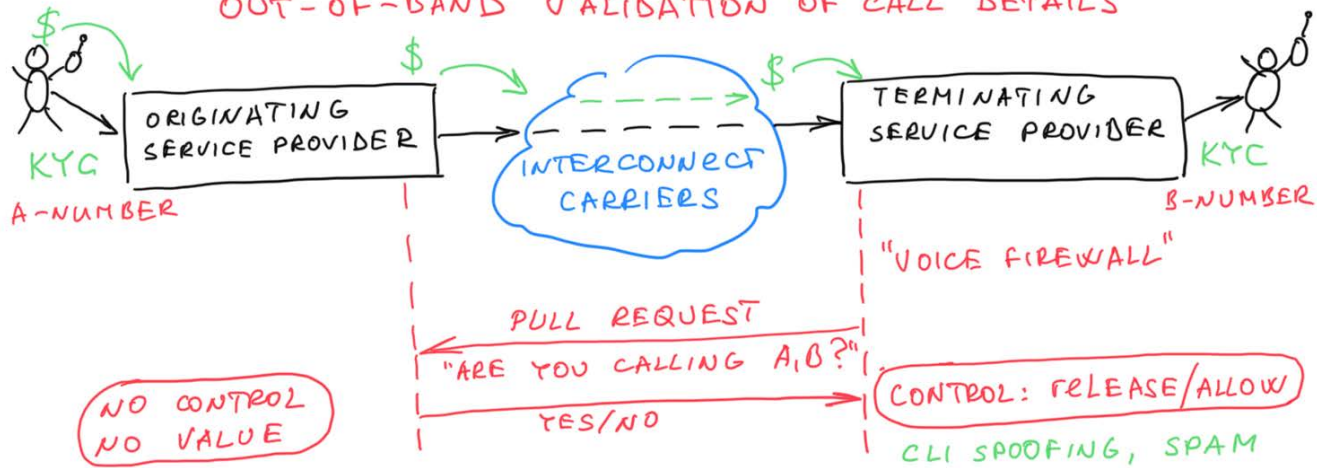
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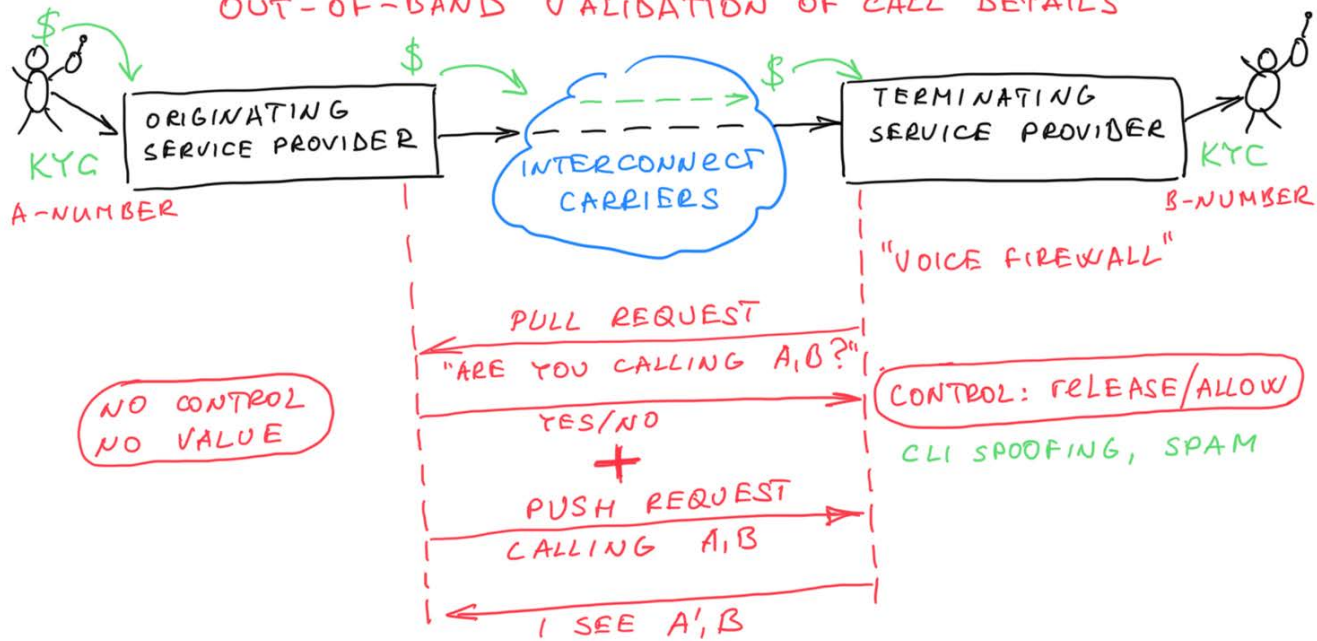
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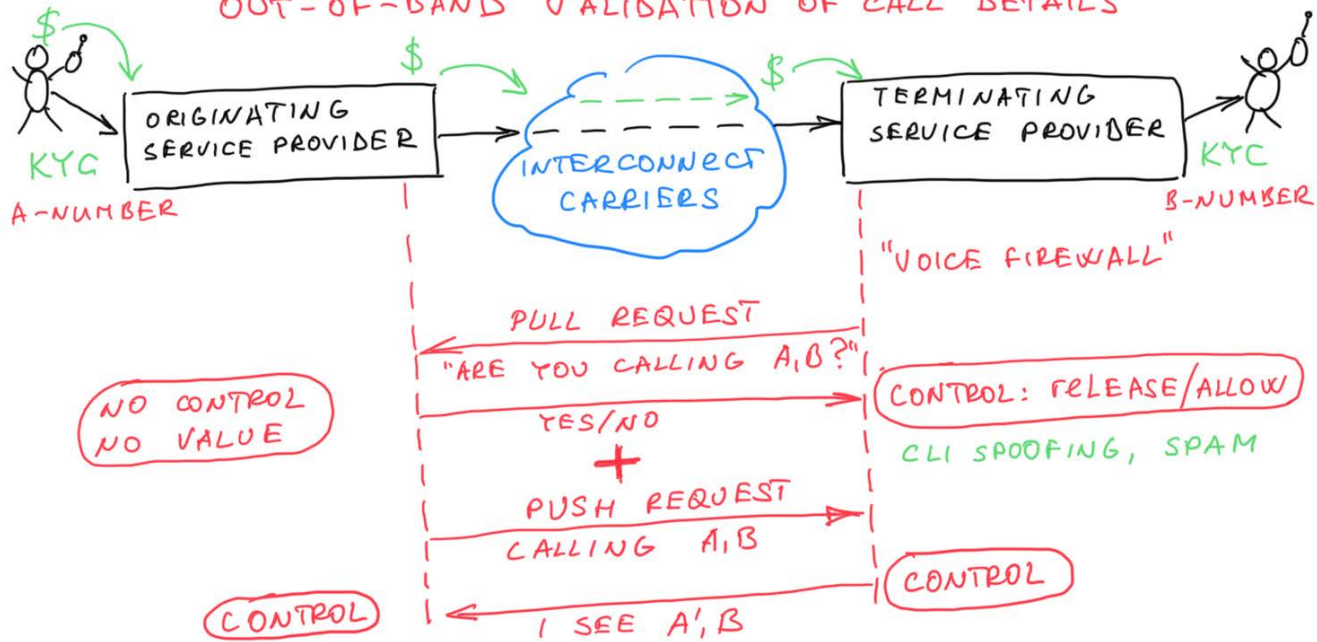
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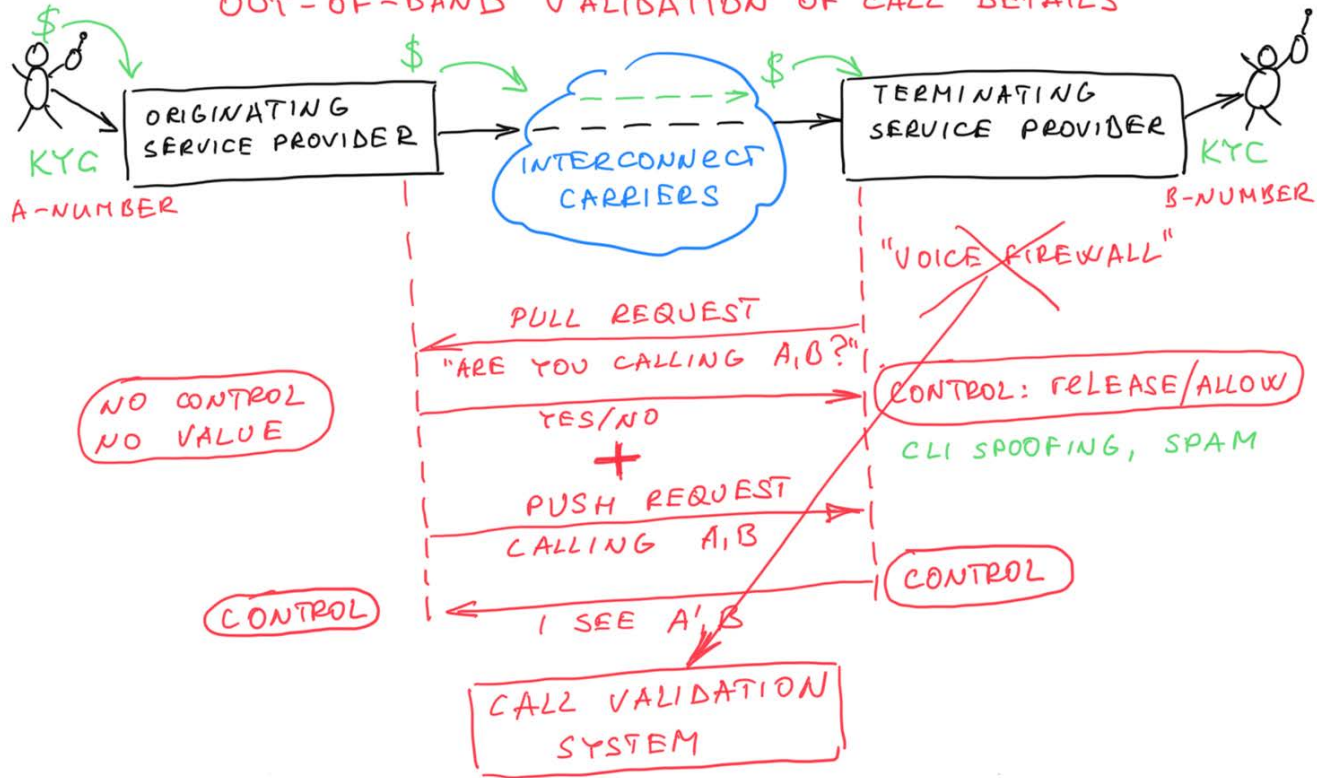
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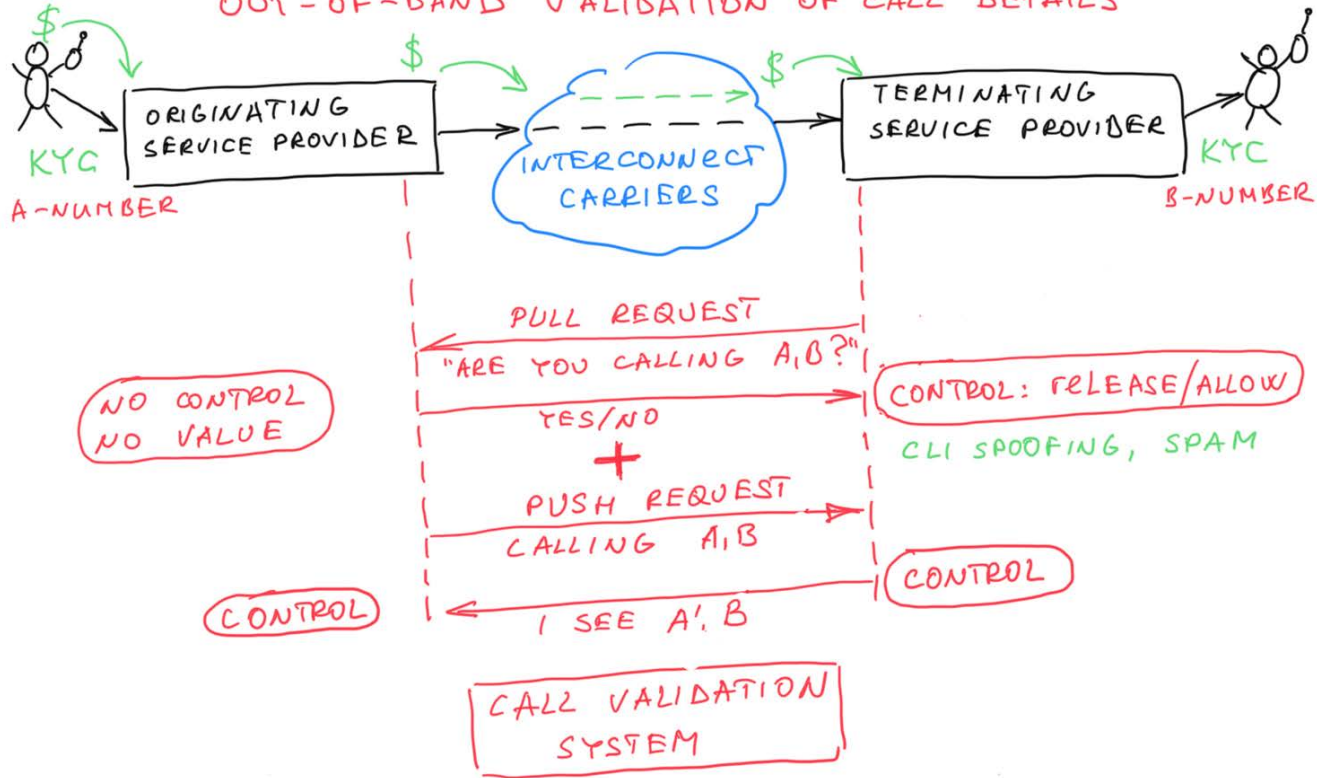
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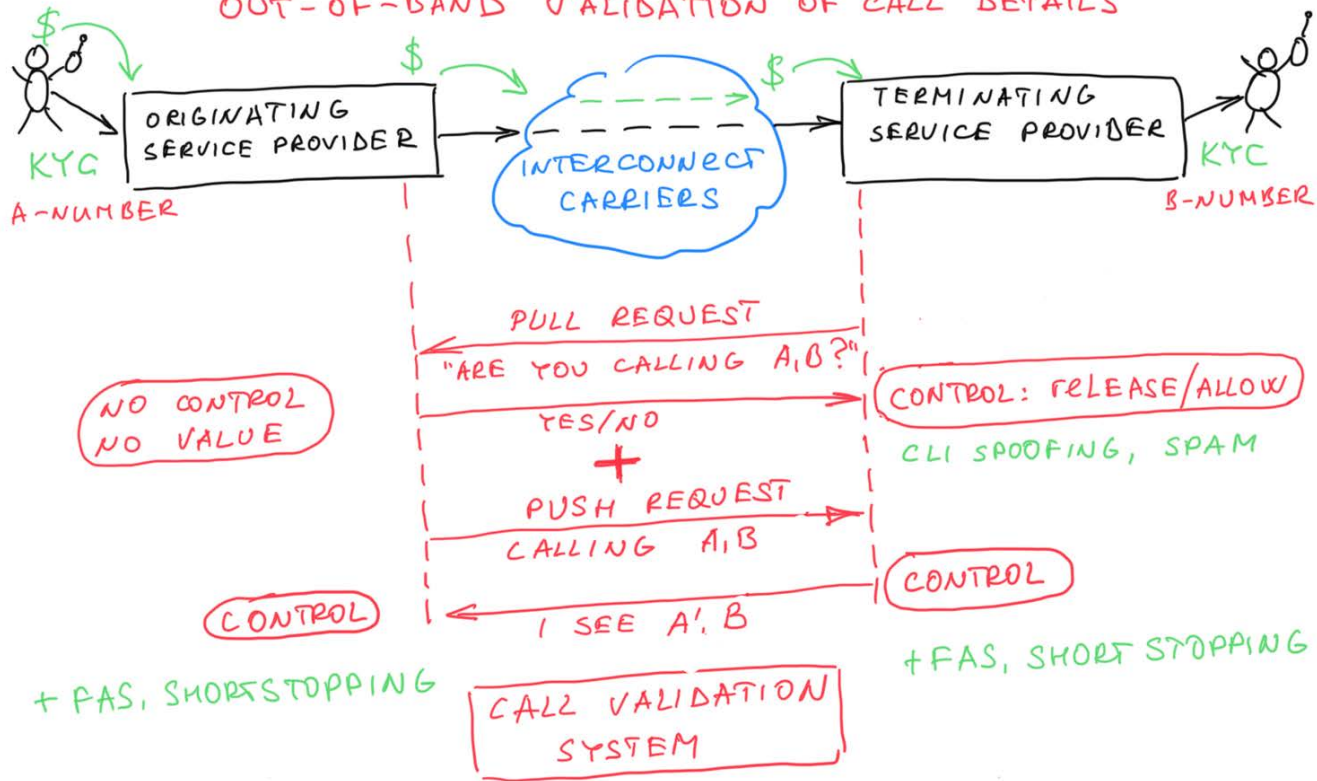
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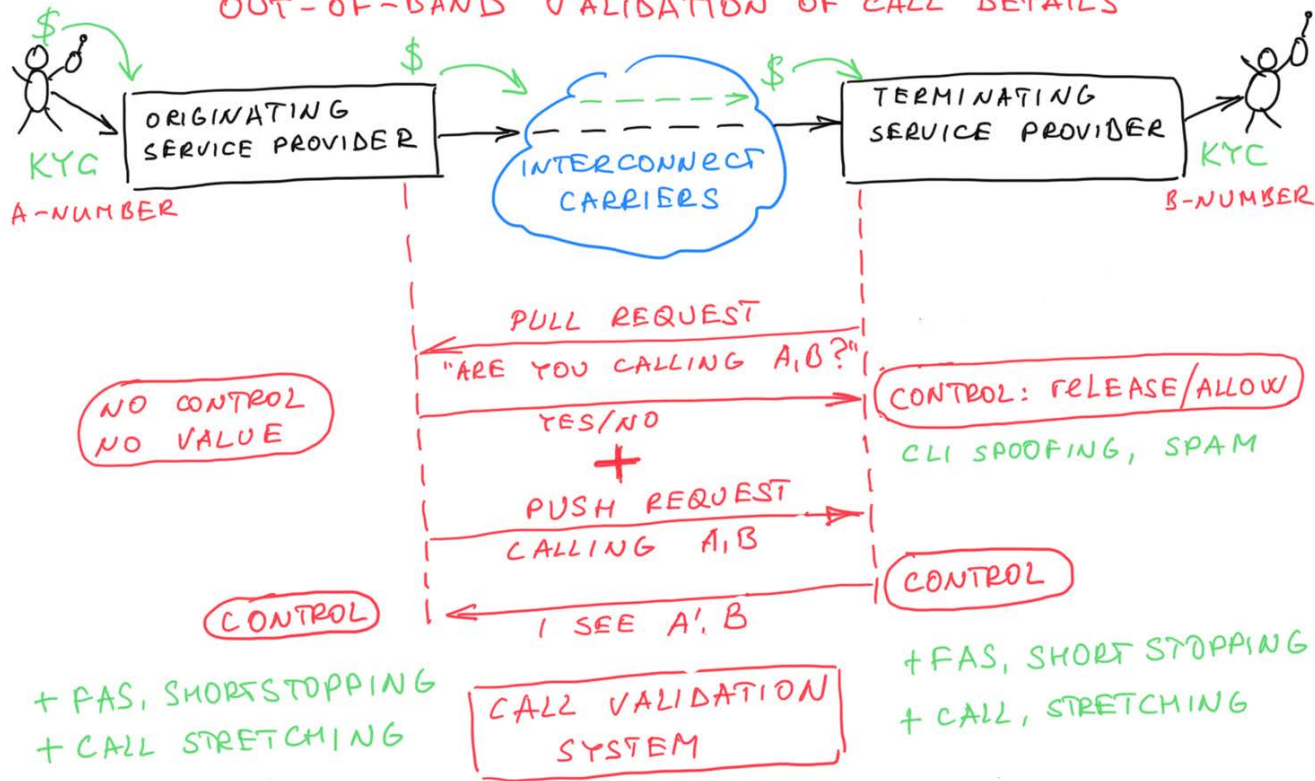
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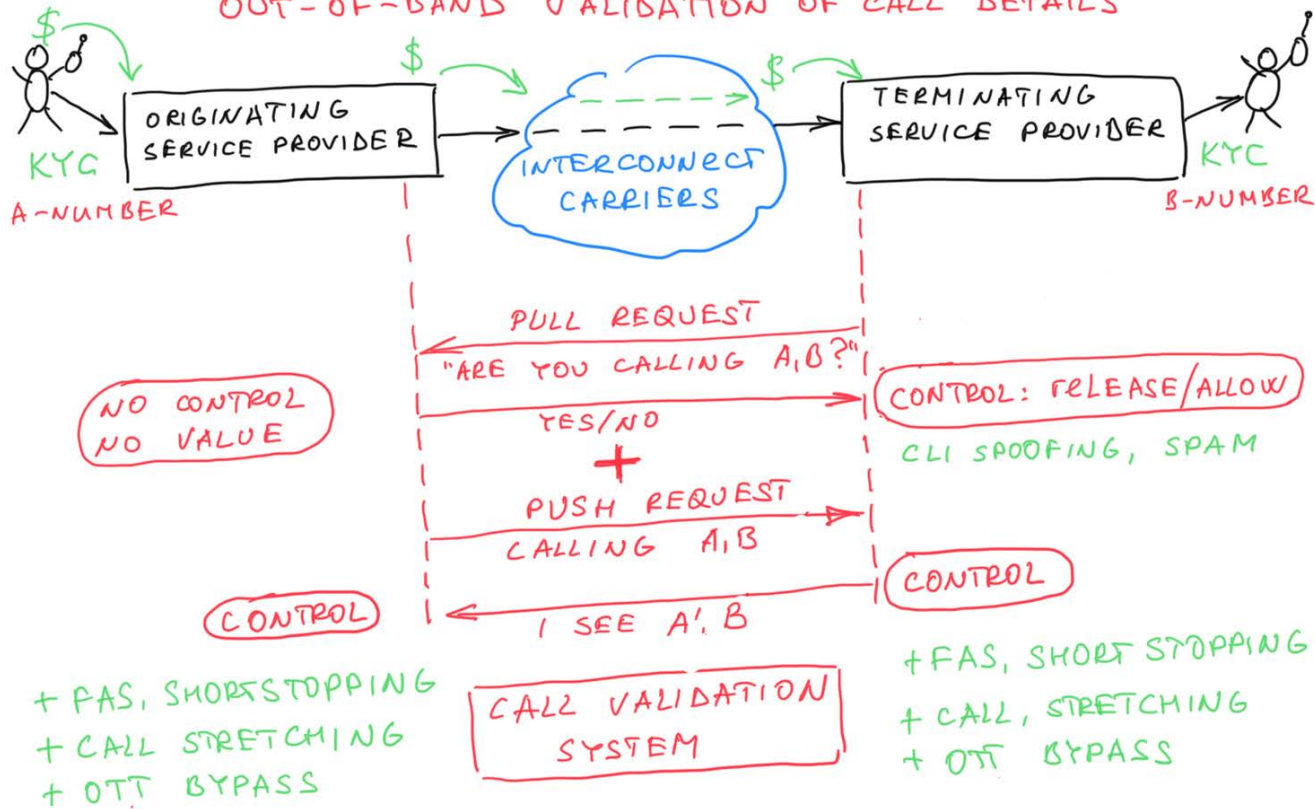
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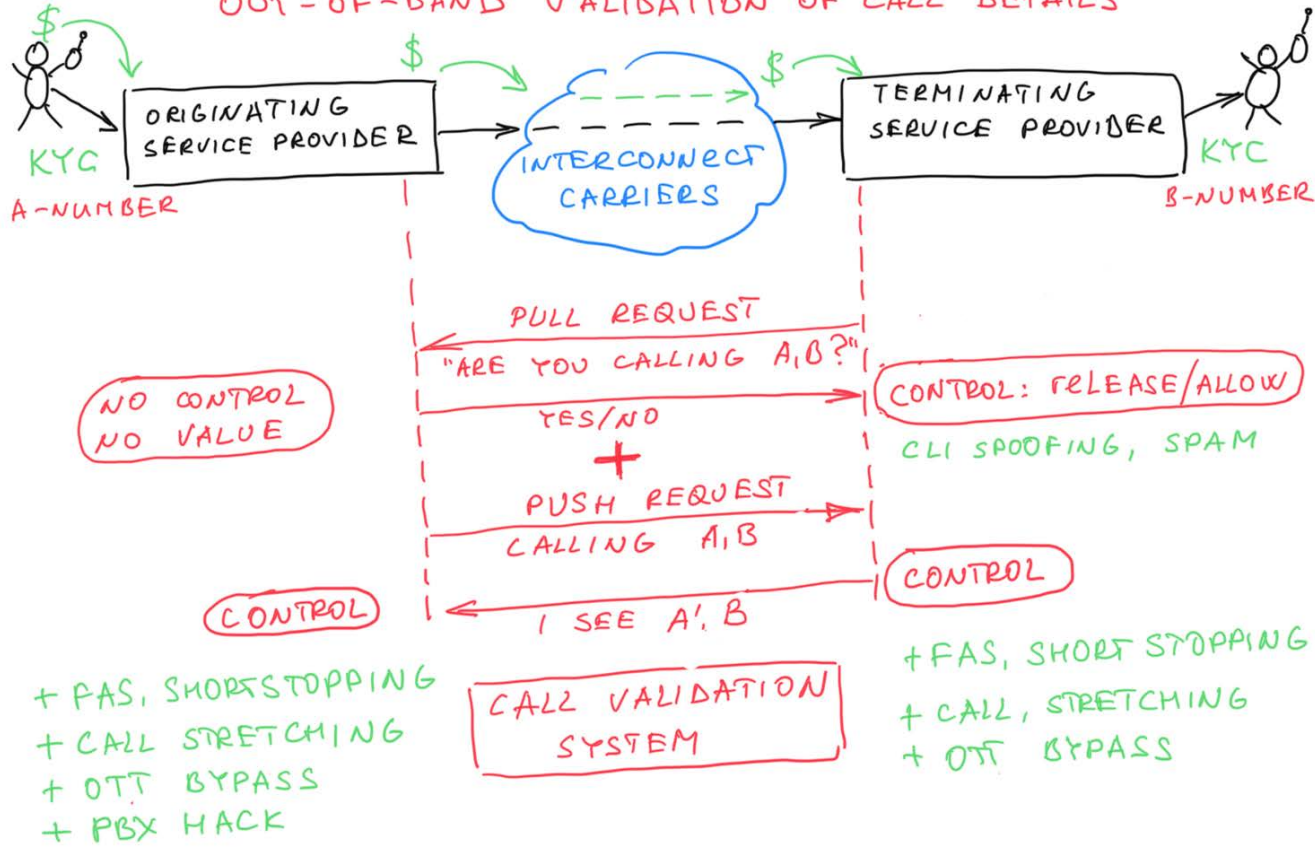
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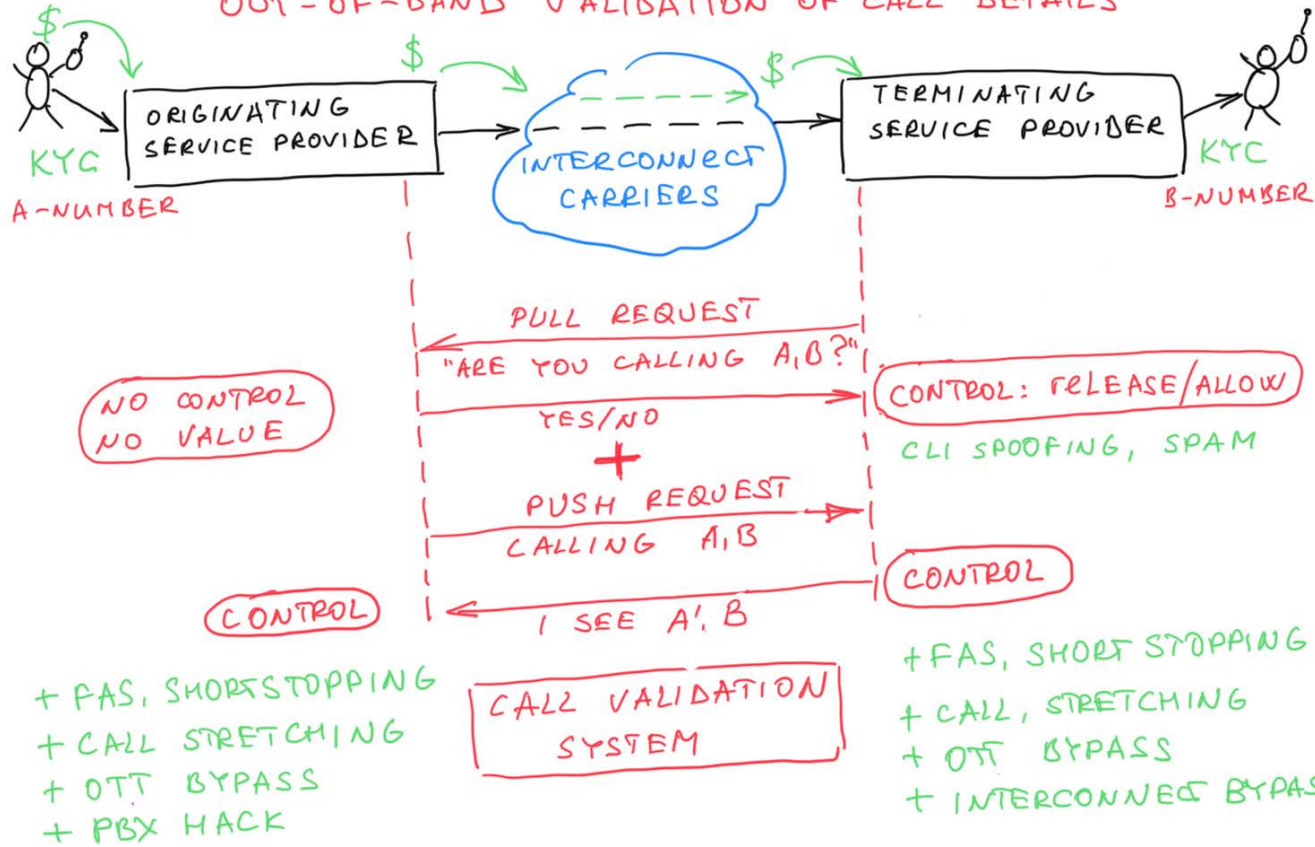
OUT-OF-BAND VALIDATION OF CALL DETAILS



OUT-OF-BAND VALIDATION OF CALL DETAILS



OUT-OF-BAND VALIDATION OF CALL DETAILS



OUT-OF-BAND VALIDATION OF CALL DETAILS



NO CONTROL
NO VALUE

PULL REQUEST
"ARE YOU CALLING A, B?"
YES/NO
+
PUSH REQUEST
CALLING A, B
I SEE A, B

CONTROL: RELEASE/ALLOW
CLI SPOOFING, SPAM

CONTROL

+ FAS, SHORT STOPPING
+ CALL STRETCHING
+ OTT BYPASS
+ PBX HACK
+ FRAUD CALL LOG

CALL VALIDATION
SYSTEM

+ FAS, SHORT STOPPING
+ CALL, STRETCHING
+ OTT BYPASS
+ INTERCONNECT BYPASS
+ FRAUD CALL LOG

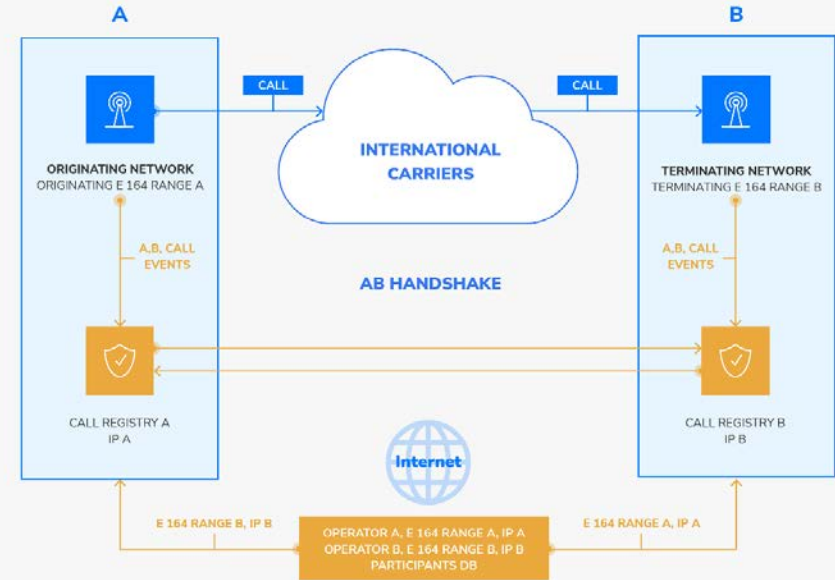
SYSTEM ARCHITECTURE AND MANAGEMENT

Both operators have Call Registries installed at their premises.

An international call originated by Operator A is routed via a cloud of carries to Operator B. Simultaneously, Operator A sends call details to Call Registry A for validation. Operator B sends details of the received call to Call Registry B for validation as well. Both CRs reach out to each other through an **encrypted channel to compare call details**.

The Call Registry can give commands to stop connecting a call or disconnect an active call

Every Operator that would like to participate provides its own E.164 range and IP address of its Call registry to the coordinating entity.



VALIDATION OF DIFFERENT CALL EVENTS

START

CONNECT

END



VALIDATION OF DIFFERENT CALL EVENTS

START

CLI SPOOFING \$ 2,6 B

(0,T)

PBX HACK WITH
NATURAL TRAFFIC \$ 3,6 B

(0)

INTERCONNECT
BYPASS \$ 3,1 B

(0,T)

SPAM, PHISHING \$ 3,24 B

(T)

WANGIRI \$ 1,8 B

(0)

CONNECT

FAS + IRSF \$ 6,7 B

(0,T)

PBX HACK WITH
GENERATED TRAFFIC

(0)

OTT BYPASS

(0,T)

END

CALL
STRETCHING

(0,T)

* CFCA

CALL EVENTS : START, CONNECT, END

VALIDATION SCHEME: PULL + PUSH

CONTROLLING PARTIES: ORIGINATING SERVICE PROVIDER
TERMINATING SERVICE PROVIDER

TYPES OF FRAUD : ALL TYPES OF VOICE FRAUD



HOW TO TRANSMIT CALL EVENTS FOR VALIDATION

- ① SIP SIGNALING : SBC, Softswitch, CSCF
- ② RADIUS AAA : SBC, Softswitch
- ③ CAMEL : SCP, STP, CAMEL GW
- ④ ISUP : STP

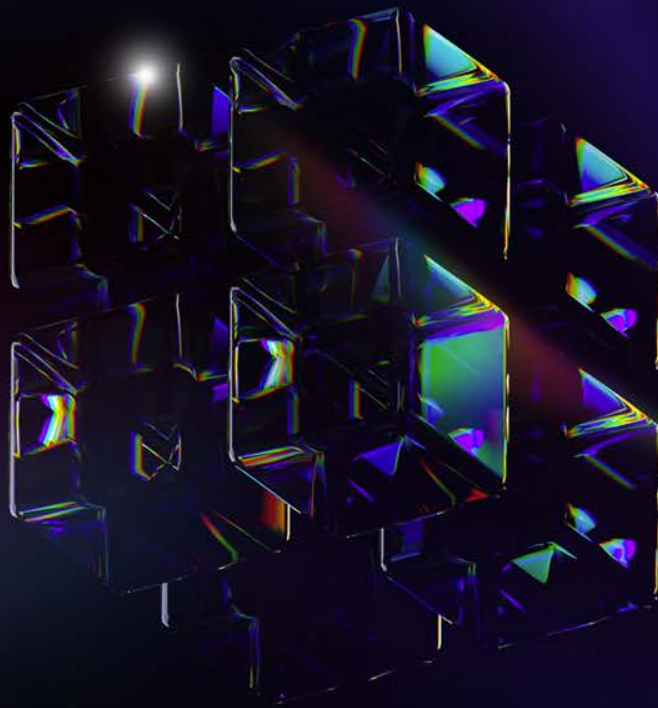


THANK YOU

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