

Better Communications with the UCoIP service.

A new vision for Corporate Identity

What You Will Learn

The importance of the new UCoIP concept in tomorrow's enterprise communications. A single address for all personal communications over various platforms. You will also learn about the necessary DNS configurations in order to implement the UCoIP service.

Overview

Unified Communications over IP (UCoIP) is the missing standard in today's telecommunications. UCoIP defines how Voice, Video, IM, Mail and Web can be used in a coordinated and integrated way supported by the well known DNS service. This is a major innovation since VoIP standard was defined long time ago in the 90's.

The new century generated a panoply of communication paradigms (Skype, Viber, WhatsApp, Facebook), all of them, centralized and not really usable in the common perspective of enterprise communications.

This new reality just make us to believe that in the future nobody will use phone numbers as they are being used by traditional telecoms for decades (descendant of the famous Bell's old telephony system, with more than 100 years old).

Why? Just because we belong to a connected IP world and there are enough standard protocols allowing mixed types of multimedia communications. But there is a strong need to redefine how to use all the available options in a professional way for enterprise communications.

The main principle behind UCoIP is to reduce the addresses that each person has nowadays, choose the appropriate protocols for each media used, and how the servers implementing those protocols are dynamically reached in the Internet mesh for each organization. The goal is to establish different forms of communications between two individuals belonging to different organizations. UCoIP is designed specially for corporate level, where it is important the corporate identity on person's addresses.

Looking at the present situation, everyone has a mobile number, fix telephone number, internal telephone extension number, skype nickname, and a corporate mail address. So when one wants to contact another person for business purposes, he needs to select the right address for the selected media or communications type. For voice, each person has 3 possible numbers; for IM a nickname for Skype or the mobile number for WhatsApp and Viber; for video probably Skype; and finally for electronic mail the well known email address. From all these addresses only one has corporate identity, the email address. We are all used to this variety of addresses and we accept it as normal, and there is no pragmatic alternative for enterprise communications.

This variety of addresses usually have to be written in businesses cards, address books, or any other directory services inside and outside the company. That's clear that so many addresses can only result in mistakes, and afterwards problems or communication delays when we will need to contact a certain person.

Another relevant advantage of UCoIP is company ownership of all addresses used for business purposes by company's persons. Adopting UCoIP only the company system administrator can create user accounts, and only him can define the user names and aliases used in all communication protocols adopted by the enterprise. Therefore the company can define a policy for all user names and aliases configured by the company for professional communications. Also, it is important to notice, that when a user leaves the company, his contacts stays property of the company and can be redirected to another person or manager.

UCoIP Service

UCoIP service must satisfy three important requirements:

1. unification of all forms of communications under a single address
2. high level of integration between all forms of communication
3. standardization (only standardized Internet protocols are used)

The first idea that come to our mind was to think about a single address that could be used for all types of communications and medias. If we had to choose one single address with this purpose, how this address would look like? It must be an address which identifies the person and the organization to which the person belongs.

We all agree that this address must be something like: person [@ company .com](#), where “person” is the username, “company” the DNS domain name, and “.com” the toplevel DNS domain. Everyone says... “But ,this is an email address!”. The answer is quite simple, why this address cannot be converted in the unique electronic person's address? Not only the person's mail address but the address that the person can use for mobile voice, fixed voice, internal voice, instant messaging conversations, video calls on mobile and fixed devices, and electronic mail messages.

The UCoIP address, the person's unique electronic address. An address that clearly identifies the person and the company to which the person belongs:

susana@ipbrick.com

Thus, if we can make a voice call, a video call, an instant message conversation or send her a mail message with the same address, how easy will be the enterprise communications. How many persons with the Susana name can we define in global centralised services, and how can distinguish the user and the company on such service.

Now talking about liability of those addresses, even if we define a policy to create addresses for users belonging to a company in such a service, like Susana-IPBrick.

In anycase, how can we avoid that someone will create an address like IPBrick-CEO?

We are all used to visit companies and brands web pages, but we don't see often web pages for persons. What would be address of a person's company web page? It is also pretty obvious that for corporate level the person web page should be `person.company.com`. This page can have public information about the person, and also the communication objects that will allow anybody accessing this page to contact the person. So this page must have a webphone, webvideophone, webchat, and webmail to simplify the communication with the person in the company whenever the caller don't have yet an UColP compliant system. That's exactly what we can name as Unified Communications over IP Web Page, or simply UColP's page, the person's communications hub.

How difficult is to memorize the person's address or even a support department, support [@ipbrick.com](mailto:support@ipbrick.com) and the respective web page `support.ipbrick.com`? That's really easy to memorize, and really simple to register the person single address anywhere without major errors.

Therefore the user email address becomes the person's universal and single address, as the all in one address for all types of communications.

The Challenge

The UColP's challenge is to reach millions of companies in the world, and turn the communications between these companies simple and easy.

The protocols and technical mechanisms necessary to allow the person's single address can be used in all forms of communication (voice, video, IM, mail. and web), are not new, and are available for long time even if not used. This means that we are able to make a voice call, a video call, an instant messaging conversation, and send an email message with person@company.com and access the person's web page with `person.company.com`.

Thus UCoIP service and principles depends essentially on the proper configuration of company domain name in the DNS service.

The DNS is used by reliable companies to define their public server names and services. In particular the web server to which we associate the special hostname `www`, where is common to place the website of the company (uses a DNS A record). As well the most configured service in DNS by companies, the electronic mail and respective server (uses the special DNS MX record).

So there is no doubts that shall be in DNS also, that we must configure the services and respective servers for Voice, Video and IM. Thus enriching the domain name definition that are being used since the begin of Internet. And with special records we can do the same for these services as we done for the Email service. We are used to send an email message to person@company.com and the DNS service indicates to the origin mail server, what is the IP address of the company.com destination mail server. Now with the UCoIP service we want to replicate this behaviour for Voice, Video and IM. Thus when we call person@company.com from the origin IP PBX the DNS service will point the destination IP address of company.com IP PBX. And with the DNS service will do exactly the same configuration for Video and IM protocols.

For the UCoIP composed service we select a set of standard protocols to be used in each of these added communication protocols:

1. Voice: SIP
2. Video: WebRTC
3. IM: XMPP

DNS

The UCoIP service requires 3 new DNS records that will allow the communications using VoIP, Video and IM be redirected to the right servers, when using the address person@domain.com for these 3 services too.

Every corporation has today and at least an A record for the web server (to host the site) and a MX record for the Mail service. Now for using the UCoIP service at corporate level the company also requires the following DNS records:

- SRV record – SIP (voice)
- SRV record – WebRTC (Video)
- SRV records- XMPP (instant messaging)
- A record – HTTP (UCoIP standard page)
- CNAME record – (UCoIP user's page)

Preferably all the UCoIP records must exist in the LAN (private DNS) and in the Internet (public DNS). So people can use the unique address of use either inside the company and outside in the Internet. Always the same and unique address, that is handled and processed differently depending on where is the calling user (on all services).

Summary

Where to go from here?

The goal of this White Paper was to present the UCoIP service. Hopefully you now have a better understanding of what UCoIP service is, and how this service can be used for your business and what are its main strengths:

1. A single address for personal communications using Voice, Video, IM, eMail and Web
2. Standard protocols for Voice, Video, IM, eMail and Web
3. Appropriate DNS definitions in the company's domain to allow the usage of a single address.

If you are curious about the usage of a single address to all forms of communications, using the UCoIP service, we invite you to request (www.ipbrick.com/ucoip) a free account for the ucoip.net experimental domain.

Now if you ask another person in your company to also ask for a second UCoIP account, then you can evaluate the UCoIP as if your company's domain would be ucoip.net. Finally if you like the UCoIP service, you recognize that the UCoIP service is an added value for your company, and you want to validate the UCoIP service in your company you just need to demand for an IPBrick in trial mode on the cloud (www.ipbrick.com/cloud).

IPBRICK SA _

www.ipbrick.com

Rua Passos Manuel, nº 66/76 | 4000-381 Porto | PORTUGAL UCoIP:

info@ipbrick.com | TEL. +351 221 207 100 | FAX +351 225 189 722