EMBEDDED AND CONTEXTUAL COMMUNICATIONS

The emergence of CPaaS (Communications Platforms as a Service) looks set to deliver on the promise that UCaaS failed to provide – the embedding of communications in business process applications and here we will look at real world examples of what the key players are achieving with their platforms and asking the question – will 2017 see the merger of UCaaS and CPaaS?

CPaaS is a relatively new term for many. CPaaS stands for Communications Platform as a Service and is a cloud-based platform that enables developers to add real-time communications features (voice, video, and messaging) in their own applications without needing to build backend infrastructure and interfaces.

Traditionally, real-time communications (RTC) have taken place in applications built specifically for these functions. For example, you might use your native mobile phone app to dial your bank, but have you ever wondered why you can't video chat a representative right in your banking app?

CPaaS providers are able to use cloud technology to enable companies of any size to easily develop and embed communications features. Development teams using CPaaS can save on human resources, infrastructure, and time to market.

OnSIP, a provider of real-time communications (RTC), says that other advantages to using a CPaaS include affordable pricing models, where developers can pay for just the services they need, such as SMS, video, or screen-sharing.

"A CPaaS also allows multi-tenancy, or the ability for multiple customers to use the service at the same time, each within a separate, secure environment."

I met with Dave Michels at the Broadsoft Connections conference in Texas last November. Dave is US based and an independent industry analyst and consultant focusing on IP PBX UC strategies and solutions; particularly around emerging trends such as cloud telephony, endpoints, mobility, and channel strategies.

Michels says that the distinction between UCaaS and CPaaS is getting fuzzy and that both industries have experienced significant growth.

"8x8, a public, pure-play UCaaS provider has a market capitalization over a billion. Twilio was founded in 2008 as a CPaaS pioneer. The company is still private, but was valued at $1 billion in April 2015. Today there are hundreds of UCaaS providers and possibly as many as 100 CPaaS providers.

The overlap is not new. Communications enabling business processes (CEBP) was one of the initial goals of UC. Back in 2011 Twilio launched OpenVBX which was designed to transform CPaaS services into UCaaS. Most UCaaS providers also offer integration tools such as APIs, SDKs, and packed integrations into services such as Salesforce, Zendesk, and Google for Work.

The overlaps are more apparent in contact centres because they inherently require custom integrations. Home Depot uses a custom created contact centre based on Twilio technology. Recently BroadSoft acquired Transera, a contact centre completely based on APIs. LiveOps teamed with Twilio and Google to create a contact centre solution that uses Chromebooks for agents."

Michels added that UCaaS and CPaaS both involve many of the same skills, partners, and resources and concluded, "I was recently reminded that Google was the 21st vendor to enter the emerging search engine market in 1998. There is still plenty of time for both UCaaS and CPaaS to coalesce, and for leaders to emerge. There is no question that applications are going to become more communications savvy over time. Nor is there any debate about ongoing UCaaS growth. How these markets will overlap, converge, or compete with each other is yet to be seen."

Contextual

The growth of the CPaaS market aligns with emerging trends in customer-facing communications.

The need for contextual communications is one of the biggest drivers of the CPaaS market as companies seek to improve the overall customer experience. Some common applications include: video-enabled help desks, SMS appointment reminders, and authentication services.

ARE CPAAS AND UCAAS MERGING?

Recently, there has been a lot of consolidation happening between UCaaS and CPaaS vendors:

▶ 2012: Telefonica bought chat platform Tokbox.

▶ 2014: Genband launched Kandy.io, which is now used by SAP's Hybris Marketing suite, and OnSIP announced its CPaaS: OnSIP for Developers.

▶ 2015: ShoreTel acquired Corvisa, Vonage acquired gUnify, Cisco acquired Tropo, and Avaya launched Zang.

▶ 2016: Vonage announced that it was acquiring Nexmo, one of the big players in the CPaaS space. Twilio, one of the first CPaaS providers, recently announced its intent to go public.

The consolidation of the CPaaS market is an indication that traditional communications service providers are trying to maintain control as RTC application development barriers lower.

Analyst Dean Bubley says that contextual communications involve both placing voice/video in context (e.g. embedded into an app, website or device) and applications which use contextual information to help the user achieve a particular objective or purpose.

Here, he says, 'contextual information' can be of three types:

▶ **Virtual context:** What you or your device are doing electronically, eg which website, app or content you're using. It could relate to which web-page you're on, the fields of a form you're filling in, the music you're listening to, or the point you're at in an enterprise workflow or a game. In essence, this is software-originated context.

▶ **Physical context:** This is information from sensors - most notably the device microphone(s) and camera(s), but also location, movement, temperature, power/ battery, heart-rate, biometric sensors and so on. With processing, this can yield information such as local acoustics (and hence whether you're in a street, room etc.), the position of other people around you, your identity via fingerprint or voiceprint, work out if you're walking/driving or showing signs of stress.

▶ **Analytic & Big Data context:** When linked to cloud platforms (or perhaps a local database), additional insight can be factored into the application: perhaps past behaviours and preferences, web cookies, records from a CRM system, or stored data from your past virtual and physical contexts. Inferred context is also important here - for example your mood or happiness.

Apps in Action:
We checked specifically with four vendors who are promoting embedded contextual communications today to ask them what apps they have working today.

Steve Tutt at VanillaIP told us that communications platforms cannot be stand-alone systems with no visibility of other business systems.

"We have developed integration between the BroadSoft call centre and Salesforce.com which will flag any calls in queue if they are Leads or Contacts in Salesforce. The Supervisor can see these calls and promote them to the top of the queue or route them to a separate destination. This is naturally of crucial importance for our customers in maximising their own sales capability. We have also extended the BroadSoft call centre by capturing the CallerID of all abandoned calls into the call centre, where the Supervisor can assign these to Agents for call back. This list is also profiled against Salesforce.com so the Supervisor can prioritise the call back of abandoned Salesforce Leads."

VanillaIP says it has a similar capability with MS Dynamics and other CRM platforms.

Tutt adds, 'For our channel partners this is a unique capability to close higher value deals where the customer uses Salesforce and has a call centre."

In line with many observers today IPCortex CEO Rob Pickering says 'Unified communications is an empty promise'.

"Instead of using fewer tools to communicate, we're using more. And while these new tools offer richer experiences, they're all siloed and lack universal interoperability.

Contextual communication changes the narrative by providing better tools for use as part of a workflow. It removes our reliance on inefficient and fragmented 'free' communication tools, instead embedding task-based, frictionless data-enriched

IPCortex CEO Rob Pickering: 'Unified communications is an empty promise'.

communication within a website or application.

There are some applications for which integrated comms are a natural progression, for example adding video and screen-share in a customer or IT support environment. Others enable entirely new services to be created. We have, for example, worked with forward-thinking organisations who are starting to explore how they can revolutionise mental health provision to young people with remote counselling.

We're also building tools for more general consumption, for example, our 'Call Me' module embeds WebRTC-enabled voice, video and instant messaging into web pages, giving context about the customer journey to provide efficiency benefits and gains for user experience. This allows service agents and salespeople to be more effective by knowing which web pages a customer visited, whether they have visited before and how often, and what services they already use. This can

Contacts	Call Logs	Voicemail	Abandoned Calls	Agent Activity

Call center	All ▾			

Call Date	Call Center	DNIS	Number	Name
18/01/2017 10:44:39	Bolts Sales		07762017263	Charlotte Quartky (Salesforce Lead)
18/01/2017 10:44:42	Bolts Sales		07900575695	Lizzy Barnes (Salesforce Contact)
18/01/2017 10:45:04	Bolts Sales		07900575695	Lizzy Barnes (Salesforce Contact)

VanillaIP - compiling a list of SalesForce.com abandoned calls for call back.