

Choosing the Right Path to an All-IP Network: IMS or Softswitch? Which is best for your business?

Ralf Arweiler, Managing Director, Kapsch CarrierCom Germany, says that both IMS and softswitch-based all-IP infrastructures can deliver major cost and efficiency benefits compared to a traditional TDM infrastructure. However, a successful transition to IP depends on choosing the right technology to meet your specific business needs.



*Ralf Arweiler, Managing Director,
Kapsch CarrierCom Germany*

Kapsch CarrierCom is an independent systems integrator for public fixed and mobile operators, providing unbiased, end-to-end support for multi-vendor network deployments.

Q: What is the difference between IMS networks and softswitch-based networks?

A: It's all in the architecture. IMS is a multi-layered, all-IP architecture that allows you to deliver voice, data, video and mobile services over a single, packet-based network. With softswitch, on the other hand, you simply replace existing TDM switches in your network with IP-based switches, allowing you to move to all-IP transport for your voice and fax or modem services quickly and easily. You can see the difference in the two approaches in the images opposite:

Q: What are the benefits of IMS?

A: By supporting the full range of voice, data and video services on a converged network, IMS increases your business agility and makes it faster and simpler to launch and scale services for your customers. If the service you want to deliver has already been developed by another carrier, you can simply integrate the required application server with your IMS environment, set up an appropriate billing process, and begin delivering the service. You can also provision network resources on demand to stay ahead of customers' growing bandwidth requirements, effectively future proofing your network. IMS also helps you ensure great performance for video and other bandwidth-intensive apps as you can reserve bandwidth on the network in advance.

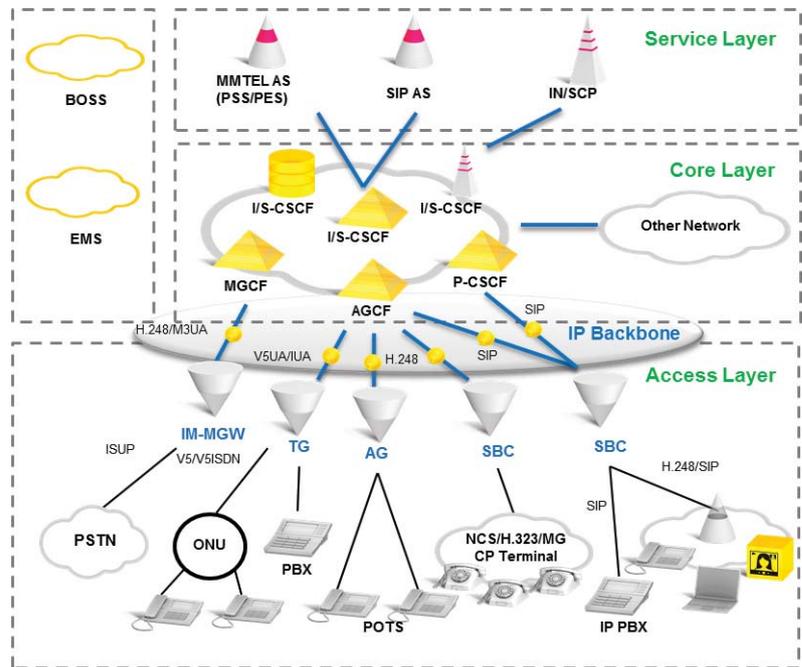
Because all your services run on a single platform with IMS, you can also dramatically reduce the physical footprint of your network, saving floor space and reducing power and cooling costs. For larger carriers, IMS may reduce the size of the physical infrastructure footprint and costs by up to 50%.

Finally, but equally importantly, IMS is able to support next-generation mobile services, such as Voice over LTE, making it an ideal architecture for carriers who are planning to converge voice and fixed-line services on a single, IP-based infrastructure.

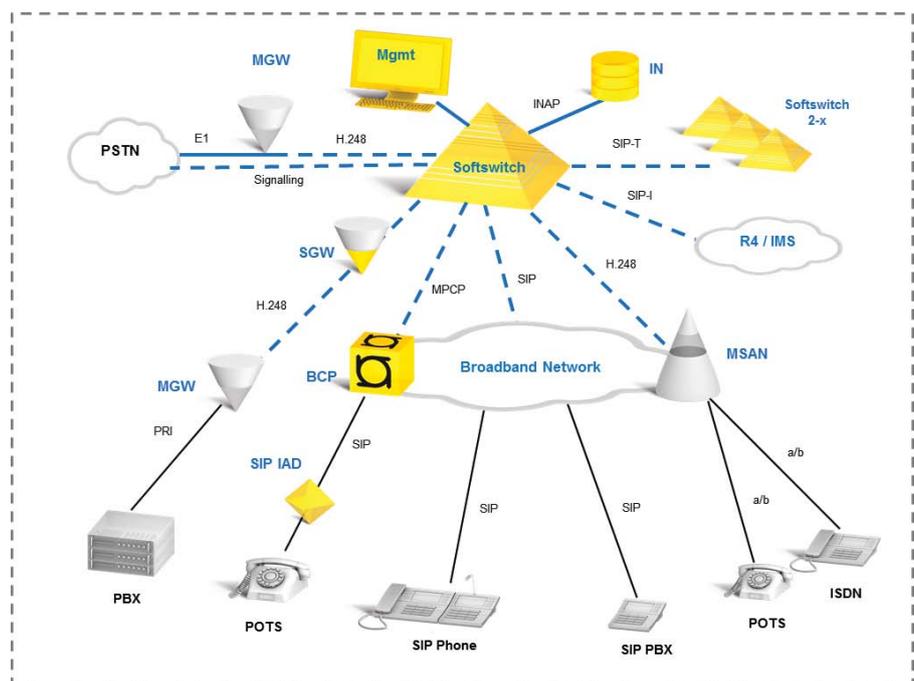
Q: What are the challenges with IMS?

A: Deploying an IMS infrastructure means replacing your existing TDM equipment, bringing multiple infrastructure components together, and migrating subscribers to an entirely new service platform. Services may also need to change slightly, so you need to be sure that your customers will accept those changes, to avoid churn. By choosing to work with an experienced integration partner, such as Kapsch CarrierCom, you can mitigate the risks of complex IMS deployments, transition customers seamlessly and deliver consistently excellent quality of service.

IMS network architecture @ Kapsch CarrierCom



Softswitch network architecture @ Kapsch CarrierCom



Q: What are the benefits of softswitch?

A: With softswitch, you can make the transition to all-IP networking quickly and seamlessly, with minimal disruption, which is great news if your customers have a low tolerance for downtime. All that's required is direct replacement of TDM switches with softswitches, and the majority of your existing infrastructure can stay as it is.

Another great benefit of softswitch-based networks is that they guarantee customer services will remain exactly the same through the transition to IP. This is extremely important where customers are on longer-term service contracts, or where past experience of service changes have resulted in customer dissatisfaction.

By preserving the lion's share of your infrastructure, softswitch deployments help you protect your existing infrastructure investments and minimise investments in new equipment. Perhaps even more importantly, customers can continue to use their existing modems or hubs, which means major cost savings for your business.

As an additional benefit, infrastructure management is often simpler for softswitch-based networks. This is because you get everything in one box, including one interface for call control, billing, configuration, fault monitoring, reporting, and more. Softswitch-based networks also help you significantly reduce your switching footprint and costs compared to TDM infrastructure.

Q: What are the limitations of softswitch-based architectures?

A: Softswitch is ideal if you deal with mostly voice traffic, but may not be the best choice if you want to deliver the full range of voice, video and data services over a converged IP network in the near future. While it's possible to deliver multiple service types with softswitch, you'll need to deploy multiple softswitches to make it work, which increases

infrastructure costs and equipment footprint. As an additional limitation, softswitch-based networks are unable to support the latest-generation mobile services, such as Voice over LTE. So if mobile convergence is in your roadmap, it might not be the best option for you.

Q: Is IMS only for larger operators?

A: Not necessarily. Smaller carriers wanting to deploy IMS can choose 'compact IMS' or a cloud-based IMS solution.

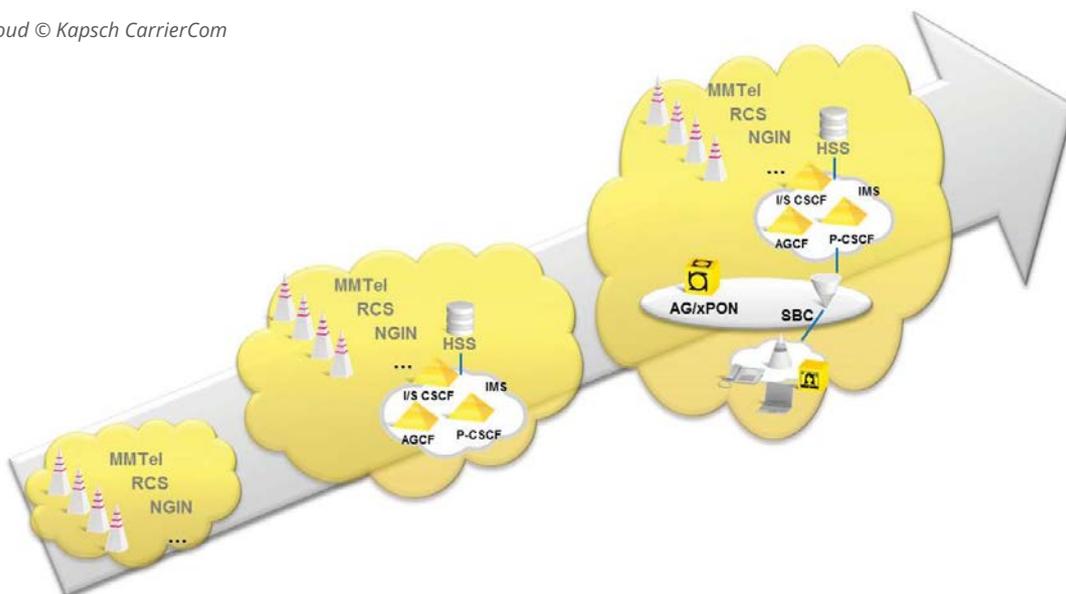
Compact IMS takes away some of the complexity and costs normally associated with IMS systems. It does this by pre-integrating multiple infrastructure elements, including call control, configuration management tools, fault monitoring tools, and more, in a single unit. This may limit the ability to mix and match multiple infrastructure products from multiple vendors, but it makes IMS accessible to organisations with smaller operational budgets.

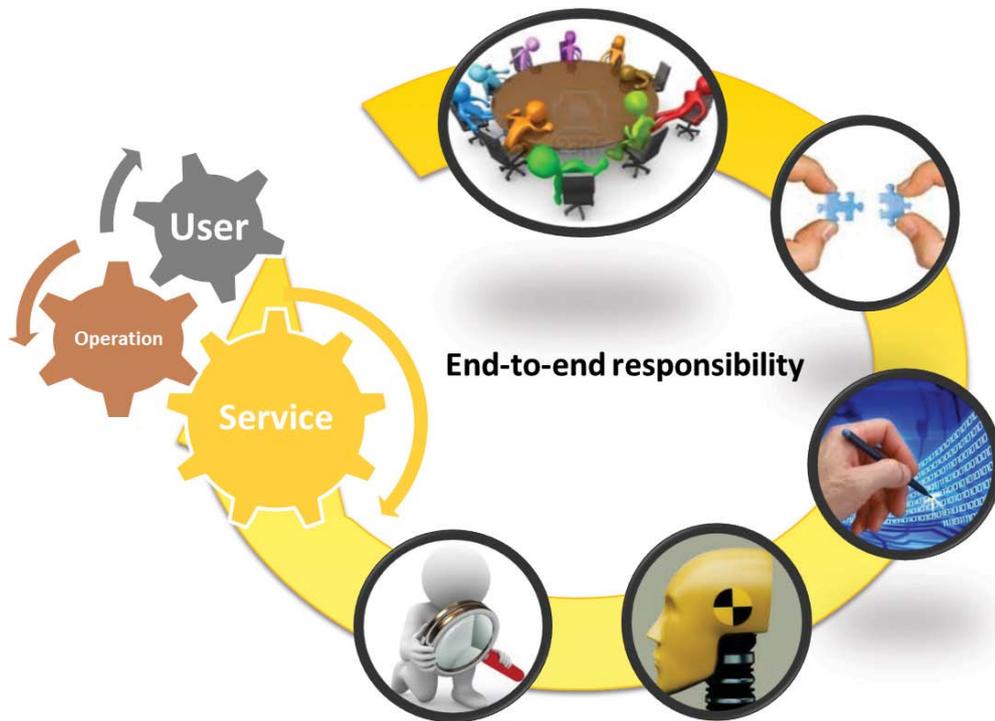
Another way organisations of all sizes can take advantage of IMS is to choose a cost-effective cloud-based solution. With this approach, you can access end-to-end IMS infrastructure that is hosted by a virtual network operator. Alternatively, you can choose to host some elements of your IMS infrastructure in the cloud, such as services, while managing your HSS database, call control infrastructure or other elements of your infrastructure in your own data centre. By outsourcing some or all of your IMS infrastructure to the cloud, you can reduce infrastructure and management costs, start slow, and reduce risk for your IMS deployment. *(See image below).*

Q: If I choose a softswitch-based architecture, can I transition to IMS easily later on?

A: Yes, you can. There are actually a number of benefits of deploying a softswitch-based network first and moving to a full IMS network later.

IMS in the Cloud © Kapsch CarrierCom





▶ As we've already seen, the softswitch approach means you can maximise returns on your existing infrastructure until it reaches the end of its supported lifecycle, at which point you can migrate to an IMS network. Deploying softswitch infrastructure first also gives you time to prepare customers for the service changes they'll experience when you do finally migrate to IMS.

With less up-front investment needed to deploy softswitch-based infrastructure, you can also minimise your short-term costs and move to IMS later, when more funding is available. When you are ready to migrate to IMS, you can run the softswitch and IMS networks in parallel to ensure everything is working properly before you migrate subscribers to the new platform. You can then preserve your investment in softswitches by using them to manage certain functions in your new IMS network, such as the media gateway control function for example.

Q: So after all that, which is better – IMS or softswitch?

A: The only answer is that there's no straight answer. It all depends on the nature of your business and what you want to achieve. As a leading softswitch and IMS partner, Kapsch CarrierCom can help you understand the benefits of each approach, and decide which architecture is right for your business.

Q: Why is Kapsch CarrierCom a great partner for IMS and softswitch deployments?

A: For lots of reasons. Firstly, we are completely vendor independent. This means we can objectively assess the needs of every customer, and choose the network components that best meet your specific needs.

Secondly, we have more than 30 years' experience of deploying all generations of network infrastructure, and we have helped our customers, as for example Telekom Austria, roll out major IMS and softswitch deployments and converge multiple services on a single, all-IP network. This experience means we can evaluate your existing systems, help you establish a clear roadmap for network evolution, and deploy a solution that addresses your specific needs and challenges.

Thirdly, we take end-to-end responsibility for your IMS or softswitch deployment. This is particularly critical for IMS, which requires seamless integration of multiple technologies from multiple vendors. While OEMs' knowledge is often restricted to their own systems, we can take the bigger view and bring together all the elements needed to ensure your deployment is a resounding success.

For more information visit:

www.kapschcarrier.com