

HiPath DX Hot-desking

Hot-desking through virtual numbering and its call path impact

With the advent of flexible working practices, and the growing dependency upon businesses to enhance customer service, mobility working has become the next strategic business tool.

Many modern organisations strive towards flexible working practices through mobile staff and robust support infrastructure, to not only gain new custom but ensure retention and maximisation of customer value. Technology now has the ability to offer the most suitable mobility solution through a myriad of applications, to ensure that the right person in your organisation can speak to a caller irrespective of their present working location, therefore projecting a homogeneous, professional image to the caller.

As with many new processes and developments, opportunists can and do, exploit embryonic technology. A growing trend in fraud and the misuse of personal numbering has made security a top feature for any mobile solution, because whilst many benefits and cost advantages can be realised through mobile working, exploitation can be a bitter and costly side effect. To ensure that security is of such a standard as to discourage these 'provocateurs' can result in a debilitating effect, on both the access/user mechanism and the appeal to the organisation to implement mobile solutions. A difficult equilibrium is sought to offer both ease of use, and tight security/control mechanisms. With DX 7.1 New World, Siemens have developed a mobile solution that offers an easy user interface and an extensive range of security options. This has only been practical, because it is part of the core switch operating program and can therefore utilise all of the features incumbent with the DX.

Like many other mobile solutions 7.1 New World has security access mechanisms requiring validation of telephone user, however in addition to this, the program handles a virtual hot-desking number like any static extension number. This means that once a virtual number has been engaged it is privy to an individual extension access table, comprising of:

- Class of service
- Trunk access class
- Centralised call logging
- CTI control

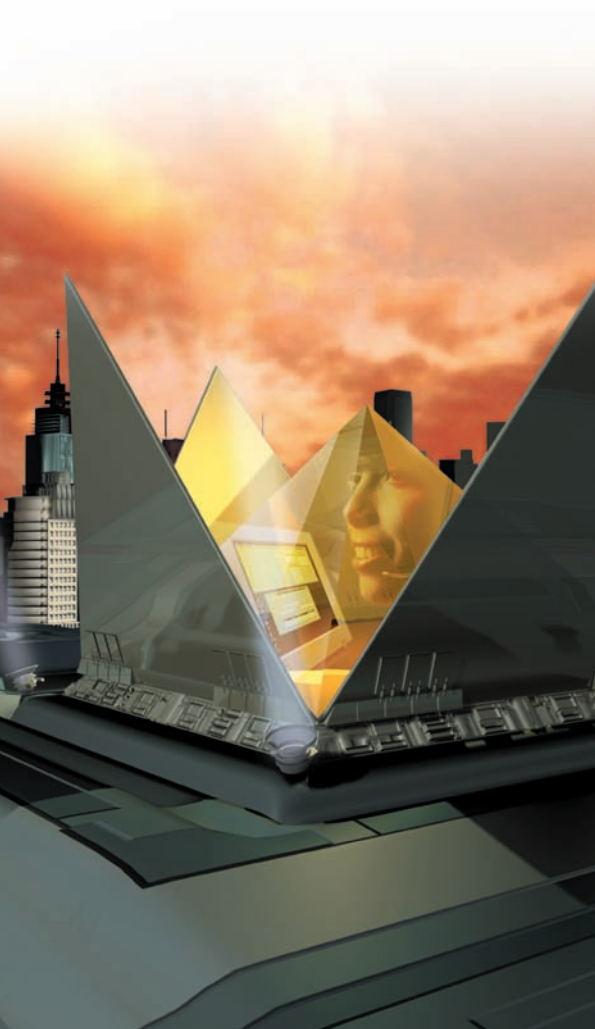
Couple this with time lock out mechanism and system administrator override and the result is a robust mobile solution, with advanced security monitoring and tracking features.

Such versatility allows an organisation to establish hot-desking areas whereby all telephones have minimal access rights, therefore ensuring no abuse by unauthorised individuals. Conversely 7.1 New World guarantees a 'hot-desker' their expected level of service wherever they may be within the network. If for instance a 'hot-desker' has the ability of priority take-over, then with 7.1 New World they would retain this feature whenever engaging the DX.

This enhanced ability however, does not come without a price. To ensure security, control and flexibility to our customers, Siemens have developed a different call path routing methodology, as presently this is the only intelligent solution to combat use and security concerns. Effectively each telephone call (either inbound or outbound) becomes 'double legged', this is because the DX where all of the user details reside (now known as the 'home' switch) has to be involved in the tele-conversation. This 'double legged' call path methodology also dictates that least call routing or route optimisation is only engaged on the second leg of the call.

Essentially there are three main types of call scenarios whilst utilising the hot-desking feature through 7.1 New World:

- Normal routing
- Alternate routing (with second leg being route optimised)
- Tromboning



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In each diagram there are three essential switches:

1. Home – this is the core switch where all of the virtual extension details are kept, and is key to ensuring tight security and flexibility.
2. Visitor – this indicates the switch where the employee has engaged their virtual number so as they can effectively hotdesk.
3. Called – the called party switch. This is the switch where the called party extension details are kept.

The following three figs diagrammatically explain how each scenario can be engaged within a private telephony network.

Normal routing

This scenario is the simplest. The hot-desker dials a 'called/third party', whereby the 'visitor' switch contacts the 'home' DX (for security validation and centralised logging etc.), and then relays the phone call to the 'called' switch whereby a connection to the relevant extension is made.

Alternate routing

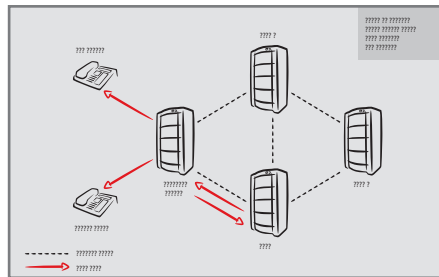
Similarly to the normal routing scenario, the hot-desker dials an extension number. The call path directs it from the visiting switch to the 'home' switch for security validation and control. Using the 'least costing routing' or 'route optimisation' parameters defined within your network, the DX then selects the most appropriate route to the 'called' switch for the connection to be made.

Tromboning

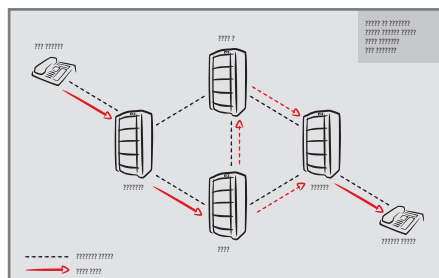
Even if the visiting switch (the DX that the hot-desker is logged onto) is the same DX as the 'called' switch (the called party switch where all of their extension account details reside), a double legged call is required to ensure that security is maintained and monitoring is consistent. Therefore as with all other scenarios the call path originates from the 'visitor' switch to the 'home' DX and then in this instance back to the 'visitor' switch, because it is also the 'called' switch. Essentially this is tromboning, however, the benefits of enhanced security and stringent monitoring and control mechanisms guaranteed by this call path methodology, far outweigh the percentage of calls where tromboning is present and 'pipeline waste' is perceived.

To ensure required levels of security, user accessibility and discourage abuse for a hot-desking solution, you need to employ an intelligent monitoring and control mechanism. To this end a central focal 'databank', has to be present in all call scenarios. Therefore a dual call path methodology has been developed for 7.1 New World, to deliver market requirements and fulfil DX owner expectations, of a robust, accessible and secured hot-desking feature.

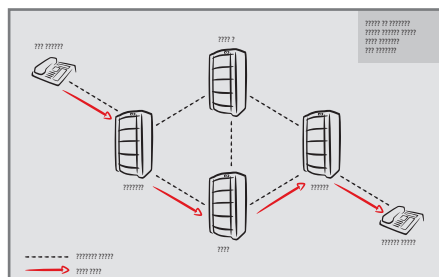
Normal routing



Alternate routing



Tromboning



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