

ARCIA Market Update

Challenges and Opportunities

Hamish Duff, ARCIA

Customer Expectations

Market segmentation with different needs for mining, public safety, enterprise, transport or perhaps “defined coverage” versus “wide area”.

Coverage, Clarity and Capacity still king.

Convergence and Convenience rising.

Wide area systems should provide multiple connectivity options to allow users to operate where they need to.

Trunking like features expected by many customers.

Data, Data and more Data, customers are using real time data across all areas of operations now more than ever, LMR is expected to play its part.

Market Responses

New terminals, better audio, longer battery life.



New options for multi-band and multi-mode devices.



4G connectivity in different flavours.



Enterprise options to bring LMR, Video & IOT together.



Subscriber device updates becoming easier.

Modern & Electric Vehicles

<https://arcia.org.au/vehicle-installation-code-of-practice/>

<https://www.fcs.org.uk/wp-content/uploads/2022/12/FCS1362-2022-FINAL.pdf>

Modern vehicles have many more constraints on the location of equipment in the cab.

Electric commercial vehicles are arriving does this require any special training?

Manufacturers working on ways to interface to standard vehicle devices using Android Auto & Apple Play

Satellite

Satellite services continuing to expand and provide essential services around Australia.

Question: Does the announcement by Optus that standard phones will be able to use Starlink for voice & data represent a game changer for remote comms.

<https://www.optus.com.au/about/media-centre/media-releases/2023/07/together-optus-and-spacex-plan-to-cover-100-percent-of-australia>

Control Room Challenges

<https://www.iccra-congress.com/>

Covid was a reminder of the importance of critical control rooms.

Retaining control room staff is harder than ever.

Keeping up with technology and budgets.

Managing incoming video and data a huge challenge.



MULTIPLE SCREENS

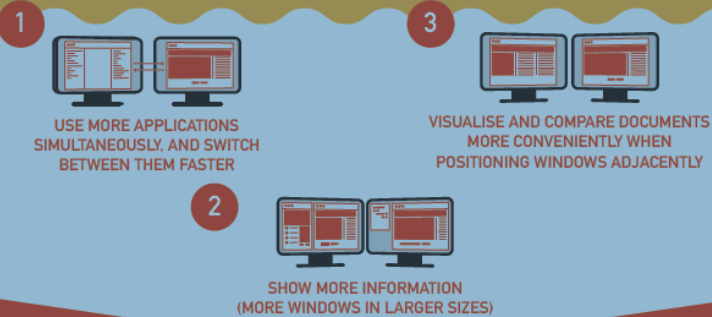
Researchers at the University of Utah indicate that multiple screen configurations are more:



Microsoft researchers found that switching to multiple screen configurations:

DRASTICALLY POWER
PRODUCTIVITY FROM
9% TO 50%

MULTI-SCREEN BENEFITS



SINCE MULTI-SCREEN WORKSPACES OFTEN INVOLVE TASKS OF GREAT CONCENTRATION AND ATTENTION, OVER LONG PERIODS OF TIME, YOU SHOULD CONSIDER OTHER IMPORTANT VARIABLES IN YOUR ENVIRONMENT SUCH AS:



In short, multiple displays provide us with more visual space and more processing options, in addition to greater control by the user.

According to research, increasing the user's power of choice and control leads to greater user commitment and satisfaction. And it is well documented that greater satisfaction is often related to greater productivity.⁴⁶

According to research conducted by IDEO on the use of displays and work processes, two main processes have been identified in multidisplay setups: active applications and passive applications.⁴⁷

To summarise, in active multidisplay applications, users constantly and repeatedly use several windows, sources and/or applications.

In both, the capacity to adjust the position of the displays has a positive effect on the user's comfort and productivity.

Since work areas with multidisplays often involve tasks that require great concentration and attention during long periods of time, other important variables related to the environment must be considered, such as providing ergonomic chairs, height-adjustable workstations and adjustable viewing supports to adapt the position of the displays as closely as possible to the ergonomics of each person. Improvements in ergonomics and comfort help to promote the commitment and well-being of people.

There are so many considerations when building new control rooms or retrofitting existing.

There are resources to help plan rooms and systems to mitigate these risks.

There is economic value when combining better information and better health outcomes for control room staff.

Image courtesy of  Gesab®


Antwerp Police Centre

Single 4K screen, virtual desk walls, User BYO keypad and mouse

Quiet, natural lighting, lots of planning

Planned different areas for collaboration, video analysis, call taking, tactical

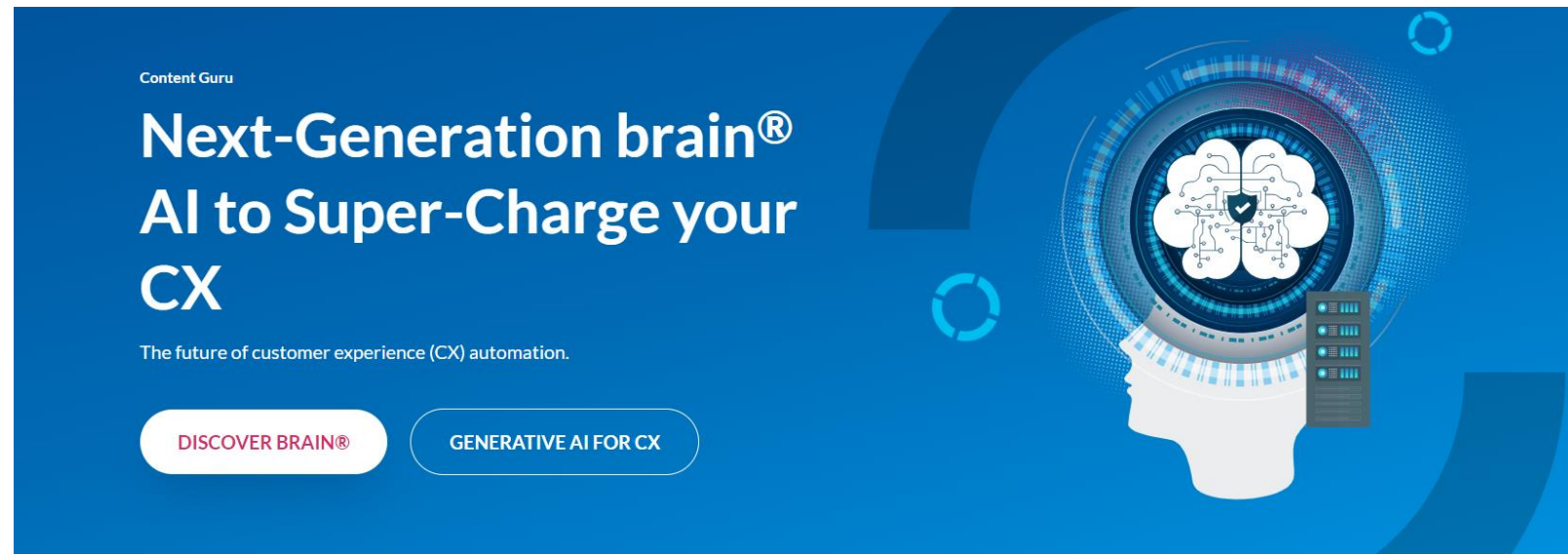
Control over temperature, lighting, screen lighting to match ambient feel

3D image courtesy of  Gesab®



A major government organization uses **storm** Machine Agent to automate voice contacts. With 100% of calls analyzed by NLP, 90% of a specific inquiry type could be fully automated. **storm** Machine Agent allows [NHS 111](#) to meet huge surges in demand. By allowing NHS 111 to divert less urgent cases to services local to the caller, **storm** Machine Agent frees them up to prioritize more vulnerable patients.

<https://www.contentguru.com/en-us/>

The banner features a dark blue background with a white silhouette of a human head in profile, facing left. Inside the head, there is a glowing blue brain with white circuitry and a shield icon in the center. To the right of the head, there is a server rack icon. The text "Content Guru" is in the top left. The main headline "Next-Generation brain® AI to Super-Charge your CX" is in large white font. Below it, the tagline "The future of customer experience (CX) automation." is in a smaller white font. At the bottom, there are two white buttons: "DISCOVER BRAIN®" and "GENERATIVE AI FOR CX".

Content Guru

Next-Generation brain[®] AI to Super-Charge your CX

The future of customer experience (CX) automation.

DISCOVER BRAIN[®] GENERATIVE AI FOR CX

ARCIA Broadband Submissions

<https://arcia.org.au/acma-public-safety-class-licence-4-9ghz-band/>

<https://arcia.org.au/arcia-responds-to-acma-options-paper/>

<https://arcia.org.au/arcia-responds-to-accc-enquiry-frequency-allocation-limits-for-remote-areas/>

<https://www.acma.gov.au/articles/2023-07/spectrum-assist-rollout-localised-wireless-broadband-including-5g-and-private-networks>

450MHz Alliance

<https://450alliance.org/>

450 Mhz (plus other bands) for critical infrastructure.

ARCIA has made an MOU with the 450Mhz Alliance.

Purpose is to understand the market, demand and potential impact on existing spectrum stakeholders.

Thank You

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