APNIC

Apster35

The twice-yearly newsletter for the APNIC membership and community

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APNIC celebrates 20 years in 2013

In 2013, APNIC will celebrate its 20th anniversary of serving the Asia Pacific Internet community. This organization and community would not be what it is today without the support, cooperation, and energy of people across the region and beyond. Just looking through past editions of Apster, it's easy to see how much things have changed!

We are in the process of collating our history, so you can see how we've grown together as a community. We'll share some interesting bits of information as we come across it, leading up to a celebration of everyone's effort and contribution during the last two decades.

We want to improve our historical archive of documents, milestones, stories, and personalities. In developing the archives, we need your help. If you have any official documents, meeting notes, emails, photos, video, and even anecdotes or other memories, we'd love to hear from you.

We are especially interested in anything that will help us tell our early story and give full credit to all those individuals, Members, supporting organizations, and partners who helped create APNIC.

Please send your contributions to **history@apnic.net**

1993 - 2011

2011 - current

1993 - 2013

APNIC's new training portal

APNIC Learning and Development launched its own training web portal, training.apnic.net, where new and existing APNIC Training participants can access information about all upcoming APNIC Training events. Having a single home for all of our training information and resources makes it easier for you to browse the expanded selection of courses in the new, simple format and pick the topic you need and learning mode that suits you. We currently offer courses in the following topics:

- **IPv6**
- **DNS/DNSSEC**
- **Internet Resource Management**
- **Network Security**
- **Routing**

Check out the events calendar to find the next eLearning session in your time zone, or a face-to-face session. The APNIC Training blended learning environment offers the sessions in three formats. We cater to all levels of experience and are continuously updating our suite of training courses. Information on each course is available:

- **eLearning: 1 hour, three time zones, every Wednesday (Free!)**
- **Tutorials: On location, 1/2 to 3 days**
- **Workshops: Intensive, 2 to 5 days**

Check out the Training Blog to see what our Training Team is up to, and visit the Library for all past Training materials, listed by course, and other free resources available for download.

Sponsorship

APNIC is actively involved in Internet infrastructure development and is proud to partner with organizations across the region wishing to host or sponsor Training events. If you want to sponsor an APNIC Training session, fill out the online form at **training.apnic.net/sponsor**

If you have any questions, please contact APNIC Training at **training@apnic.net.** See you at the next Training event!

Explore APNIC's new training website!

TRAINING

training.apnic.net

IPv6@APNIC

The APNIC Labs IPv6 measurements are showing encouraging trends. Although the absolute numbers of various IPv6 deployment indicators from around the world look small, there is a robust growth curve.

In 2011, the IPv6 routing table grew by 50% and by 40% in 2012, compared with 13% and 10% IPv4 growth in 2011 and 2012, respectively. The shape of the IPv6 growth curve shows exponential growth compared to the linear growth of IPv4.

It's important to remember that prefix announcements into the global routing table do not differentiate test networks from production networks, and are also not free from the impact of announcements of fragmented address space. However, the momentum of IPv6 prefix announcements is a good indication of decisions by network operators to deploy IPv6.

According to APNIC Lab measurements, IPv6 end-user readiness grew 250% in 2012 - quite encouraging growth. The data for the world average indicates that currently, 0.7% of end users have IPv6 reachability. APNIC Labs monitors end-user readiness at the granular level of AS Number, economy, and geographical region. (See **www.labs.apnic.net/index.shtml**)

It's a very important challenge for all Internet stakeholders in the region to further strengthen the momentum of IPv6 deployment in 2013. In response to feedback APNIC received in the 2012 Survey, we will be more involved in our capacity to support IPv6 deployment in the following ways:

- Share best practice information with key stakeholders to help with IPv6 uptake
- Provide IPv6 deployment advice/consultation to Members
- Provide practical hands-on training to help with IPv6 uptake
- Increase efforts to raise awareness among stakeholders about IPv6
- Increase coordination and collaboration with local Internet communities to help facilitate IPv6 uptake

In 2013, IPv6@APNIC will continue to collaborate and communicate closely with Internet stakeholders in the region to meet the demand for real and tangible deployment. The program will do this by providing practical and useful support and up-to-date information on www.apnic.net/ipv6, for example, "IPv6 Transition Stories" and "IPv6 Best Current Practice".

Join us on site or remotely for the APNIC 35 IPv6 Plenary "IPv6 in Mobile Networks - A Look Beyond the Horizon", to hear more about IPv6 deployment in mobile networks. Deploying IPv6 in these networks is challenging, yet it is another very important area where IPv6 deployment will have a significant impact for the future growth of the industry. The panellists have both positive and insightful stories to share about their IPv6 experiences.

www.apnic.net/ipv6

See how APNIC Labs measures IPv6 in your economy

APNIC's perspective on IPv4 transfers

There has always been an avenue for transferring IPv4 resources between APNIC accounts, as prescribed in Policies for IPv4 address space management in the Asia Pacific region. Now there are more options, to help the community redistribute IPv4 as needed. Every APNIC Member can request up to a /22 of IPv4, as stated in the "last /8 policy", but after that if some Members still require more they can apply for a pre-approval for a transfer from another APNIC Member, or from outside the Asia Pacific region.

There has been support for intra- and inter-RIR transfers, and we established a new mailing list, apnic-transfers@apnic.net, for community discussion on the topic of transfers. The pre-approval service introduced last year has been modified, with the implementation of prop-104, extending pre-approvals from 12 to 24 months. The pre-approval listing service is optional, but provides an easy way for those looking to redistribute unused resources to someone who needs it. We also have a list of four recognized IPv4 brokers, who have all signed agreements with APNIC to follow regional policy when facilitating transfers.

There does not seem to be a discernible pattern in transfer size, although Australia has been the most active in transferring resources and there have been four inter-RIR transfers. In December 2012, one Member successfully transferred an entire live network.

The average total time it takes to process a transfer is between one and two weeks, keeping in mind there is a one-day delay for transfers between APNIC and ARIN for the time difference. Transfers are now subject to a fee, equal to 20% of the transferred block annual fee, payable by the recipient or source if transferred out of the APNIC region.

You can see the log of all APNIC resource transfers since 2010.

www.apnic.net/transfer

Wrapping up the WCIT process

Internet governance grabbed more than its usual share of headlines in 2012, thanks in part to the grass roots campaign waged against WCIT – the World Conference on International Telecommunications.

Held in Dubai, United Arab Emirates last December, WCIT-12 was an International Telecommunication Union (ITU) conference convened to revise an intergovernmental treaty called the International Telecommunication Regulations (ITRs). It might be more helpful to summarize the outcome/analysis here – rather than keeping people in suspense...

Perhaps a little history might help put this Treaty into perspective and offer some insight into the working of the organization responsible for it.

In 1982 the ITU Member States resolved that in six years' time the Secretariat should convene the World Administrative Telegraph and Telecommunications Conference (WATTC-88) to consider proposals for a new regulatory framework to archive the existing regulations – the Telegraph Regulations (1973) and Telephone Regulations (1973).

Duly, the ITRs were agreed in Melbourne, Australia during a conference that, unlike the WCIT held 24 years later, did not benefit much from labour saving devices such as laptops, wireless networks, and the Internet.

Despite recent attempts at revisionism, the ITRs were designed primarily to regulate the relationships between incumbent national monopoly telephone service operators. For most economies, privatization and competition were introduced in the years following the WATTC.

Although the ITRs were agreed upon and signed in 1988, they did not come into force until 1990 – the year Sir Tim Berners-Lee first imagined the World Wide Web.

Eight years later (in 1998, the year ICANN was formed) Members of the ITU were already starting to talk about updating the ITRs. However, it was another 14 years before WCIT-12 actually undertook the task in December of 2012.

For those countries that choose to sign up to the treaty, the final acts of the conference will come into force in 2015. That will be 17 years after the ITU began talking about updating the agreement and 24 years since the WATTC actually negotiated the first ITRs.

A Tough Call

Reviewing the treaty after all that had happened in the intervening quarter of a century was never going to be an easy process. By 2012 the World Wide Web and other IP-based network services have become pervasive and inextricably entwined with economic, social, and political life in a way that circuit switched telephony never was and never will be. In the intervening years, privatization of state-owned carriers and nearly pervasive deregulation of the telecommunications industry had given rise to a complex web of interconnected, privately-owned and operated networks which we casually call The Internet.

Also, in the interim, traditional telephone service carriers had digitized their networks and begun using Internet Protocol trunk as a transit technology making it even more troublesome to define The Internet.

A definition of Internet should not have mattered to a telephony treaty. However it became obvious from some of the leaked submissions to the Council Working Group and the preparatory processes in some regions, that there were some governments who wished to use the WCIT-12 process as a way to gain more control over certain aspects of Internet operations.

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APNIC's interest in the conference arose from concerns that some Member States saw the development of new ITRs as an opportunity to expand the scope and mandate of the treaty beyond telephony into Internet governance issues. As a supporter of the 2005 WSIS principals, APNIC believes the Internet is best managed in an open, transparent, and democratic way where multiple stakeholders are able to contribute equally to the discussion and participate in the decision processes.

Against a rising tide of concern from non-governmental stakeholders, the ITU Secretariat defended the process and intention of the conference claiming the revision of the ITRs was not intended to seek a greater role for the ITU in controlling the Internet. Unfortunately, some ITU Member States had very different plans to their Secretariat.

Governments only thank you

As an ITU-D Sector member rather than a Sovereign State, APNIC was not able to participate in the WCIT process, but thanks to good relationships with APT (the Asia Pacific Telecommunity) staff were able to attend the Asia regional preparatory meetings as observers. APNIC also contributed where it could, providing remote participation facilities to APTs third prep meeting in Cairns, Australia.

The grassroots campaign against WCIT began to gain momentum in the lead up to the conference as more stakeholders expressed concern about the lack of transparency and opportunity to participate in what was clearly going to be a debate about Internet governance.

As only government delegations could participate, Internet technical specialists, members of civil society, and a variety of corporate stakeholders concerned about the potential outcomes, found themselves recruited as advisers onto some delegations that were supportive of the multi-stakeholder model as advisers.

In this manner, with government delegations participating and few other stakeholders advising from within, a revised version of the ITRs was hammered out over two weeks of tense negotiations.

At the end of the process, a large proportion of the ITU Member States decided the outcome did not meet their objectives and chose not to sign on to the agreement – while 89 Member States signed, 55 Member States did not sign, and the remaining 49 Member States did not attend.

Predictably, the debate did at times become heated as those determined to increase government control of the Internet met head-on with delegations cautious about changing a governance system without fully understanding the implications of that change.

Despite the ITU Secretariat's efforts and assurances that the WCIT would be a multi-stakeholder process driven by consensus, the conference failed to make much progress toward a more transparent, participatory forum.

Regrettably, not all voices were heard. The promised open multi-stakeholder forum did not eventuate. Microphones were only open to official delegates and ITU officials, relegating all other stakeholders to an observer role. The eventual descent into voting as a means of reaching agreement neatly restricted decision making to representatives of Member States and prevented consensus to be reached

While plenary sessions were webcast to remote observers, most sessions were not. In fact, critical negotiations that determined the final draft of the new ITRs were conducted in closed meetings not even open to all Member States.

Outcome

APNIC's concern at the outcome of these negotiations is that they exposed deep divisions among delegations on the Internet and Internet governance issues. WCIT exposed divisions that bear strong correlations between developing and developed countries.

The meeting's failure to reach a satisfactory consensus on the ITRs highlighted the ITU's poor fit as a venue to undertake Internet governance. Unable to navigate decisions even amongst its own members, the organization seems ill prepared to incorporate the valuable inputs from a wider set of expert stakeholders with interests in the Internet governance debates.

Although ITU Member States raised legitimate concerns about Internet development and governance, the Conference failed to adequately resolve them. Many of these concerns are so complex in nature it is reasonable to expect that they will only be resolved once they are carefully deconstructed and investigated in an open, transparent, multi-stakeholder dialogue where each perspective is carefully elaborated and appropriate solutions carefully negotiated through a consensus building approach.

WCIT demonstrably failed to address the concerns Member States brought to the table for inclusion in the ITRs. These concerns still exist and governments around the world, including many in the Asia Pacific, will continue to seek answers.

In the post-WCIT world, it is beholden on all Internet stakeholders to commit to an ongoing program of engagement with governments in their scope of influence and encourage support for and participation in true multi-stakeholder Internet governance forums.

Specifically, the Internet Governance Forum (IGF) was mandated by WSIS as a "multilateral, multi-stakeholder, democratic, and transparent" venue where the legitimate concerns of all Internet stakeholders can seek a resolution. The 8th Internet Governance Forum will take place in Bali, Indonesia in November 2013.

APNIC's role in the WCIT-12 process

APNIC's priority throughout the WCIT process was to increase engagement with governments in the Asia Pacific region. The main vehicle for this was the APT regional preparatory process, which took place over five meetings. APNIC was invited to attend all five meetings as an observer and worked to become a trusted source of expertise on Internet related issues facing WCIT. APNIC attendees talked a lot with APT governmental members, particularly about numbering and interconnection; the two topics that were identified as the biggest concerns to the APNIC community facing WCIT. APNIC's Chief Scientist, Geoff Huston developed the main positions on these topics in a series of articles, available at **www.apnic.net/wcit**

These articles were presented to governments in our region during the APT meeting held in Cairns in March 2012. They were also published in different venues, including Potaroo, CircleID, and the Internet Society (ISOC), representing APNIC's voice on WCIT. As APNIC was only an observer at APT meetings, APNIC representatives were not able to speak or submit any documents during these meetings. However, APNIC hosted a dinner during the regional meeting in Cairns and was able to share Geoff's articles during this dinner. During his speech, APNIC's Director General, Paul Wilson said, "Be careful not to hurt the Internet as we know it today."

Geoff's articles were frequently referenced in forming many government positions leading up to WCIT, even beyond our region. AFRINIC and Lacnic translated them into Spanish and French, respectively, and they were read by delegations all over the world.

After that meeting in Cairns APNIC received some feedback, from the ITU and also from some government delegations, that Internet organizations, including RIRs, were mostly critical to governmental views on WCIT. Governments looking for support asked for more constructive ideas, ideally in the form of treaty language that could be proposed to be part of the ITRs.

APNIC engaged in analyzing the ITRs and commissioned some work to develop compromise text based on treaty language. This resulted in predictions on the final WCIT outcome and a compilation of all proposed changes to the ITRs made at the ITU Council Working Group on WCIT. The first product, which we called "the worse acceptable WCIT outcome", helped us give better advice to some delegations. Some of the language proposed did make it to the last version of the ITRs (i.e. "robustness" in the context of security discussions). The second product was translated into a visualization tool, **www.wcit-proposals.info**

NRO support

At the NRO level, APNIC also lead two initiatives related to WCIT. One was to support an original approach to engage with new stakeholders in producing a voice in this process; the output was a letter sent to the UN Secretary-General, Ban Ki-Moon that was signed by the International Trade Union Confederation and Greenpeace, expressing strong views about WCIT's closed proceedings and wide impact. The new stakeholders established a global campaign "Stop the Net Grab", which attracted tens of thousands of supporters worldwide, with the majority of the signers from the USA (38,000+), Germany (30,000+) and the UK (16,000+).

The second initiative undertaken under the NRO banner was a draft contribution to an ITU public consultation.

APNIC's view

The APNIC Secretariat believes the main reason consensus was not reached at WCIT was that the ITRs failed to keep the original remit of international telephony. As a result, the revised document includes some references to the Internet, explicitly and implicitly. Most of the negotiations occurred behind closed doors among a small group of countries. There was also no public debate during the Conference on any of the most contentious issues, that is, Internet governance, security, and spam. This was a marked difference in proceedings from the traditional model of multi-stakeholder discussion observed at the Internet Governance Forum.

Sida contributes AUD 1.5 million to expanding grants and awards programs

In November 2012, the Seed Alliance was granted AUD 1.5 million from the Swedish International Development Cooperation Agency (Sida) to further support Internet innovation projects in developing regions.

The grant, over three years, allows the expansion of current awards and small grants programs implemented by alliance members, FIRE managed by AFRINIC, FRIDA managed by Lacnic and ISIF Asia managed by APNIC. The Seed Alliance is a mechanism to give back to the local Internet community by investing in ICT research and development; to support research that can assist Internet growth in the Asia Pacific region; and to facilitate networking and information building throughout the Internet community.

This grant is great news for the APNIC community, as it will mean more investment in the form of small grants and awards for the region, which encourage people to develop smart ideas and put them into practice.

APNIC Learning and Development Director Philip Smith has been heavily involved with development projects throughout his career and looks forward to working closely with Lacnic and AFRINIC in using these new resources to fund more projects in the form of grants and awards.

"The ISIF Asia program had limited resources during 2011 and 2012, and could only give awards to innovators in the region. It is really exciting to be able to provide more substantial support again. The Seed Alliance was created to attract larger funding sources, and this grant proves the approach has been effective so far," Mr Smith said.

Investment in development in the form of small grants and awards can represent a highly effective means of stimulating innovation and technology adoption at a local level. By encouraging the rapid dissemination of successful ideas, the grants and awards also create a positive chain reaction of adoption and adaptation, leading to wider benefits.

Additional activities

In addition to activities already being conducted in each region, the Sida grant will allow the regional programs to:

- Expand reporting and monitoring to gain a deeper understanding of available funding and capacity-building tools.
- Provide increased support to prospective applicants from isolated communities in preparing projects and proposals.
- Allocate scholarships to former grant and award recipients, to help them further develop their projects, build capacity and reach sustainability.
- Continue to organize events within the Internet Governance Forum (IGF) meetings to enable award winners to showcase their projects, share their experiences, and participate in discussions about the future of the Internet.
- Strengthen the new FIRE Africa program, based on lessons learned from the FRIDA program and ISIF Asia.

"We have seen many high profile examples of Internet development, such as the proliferation of community wireless networks in remote areas, which can create a mistaken perception that innovation no longer requires support," said APNIC Director General Paul Wilson. "On the contrary, there are more opportunities than ever for communities to benefit from new technologies, but new ideas often still need support, as do the people who create them."

Following this renewed financial support, ISIF announced the 2013 grant winners and was able to distribute a total of AUD 330,000 in grants to 11 projects in 9 Asia Pacific economies in 2013.

"Sida believes that new technology can serve as a tool to create innovative, effective solutions that can assist people living in poverty to improve their daily lives. The ISIF Asia grant winners of 2013 are clear examples of how this can be achieved," said Sida ICT4D Program Officer Ola Pettersson.

Previous projects funded

Examples of previous projects funded by the Seed Alliance partners include:

- A health emergency information system in the Philippines. An emergency information system that uses SMS technology and Google Maps during disasters and periods of infrastructure failure to gather and disseminate vital information. This model has been used successfully in a number of emergency situations between 2010-2011.
- Wireless access to information services for indigenous communities in remote, rural remote parts of Colombia. This pilot project saw the design and implementation of a low-cost open source wireless network in a remote rural area of Colombia, including training, content and services to support the indigenous population's existing social and cultural activities.
- A Telehealthcare System in Pakistan. This health database leverages the high penetration of mobile devices in Pakistan to allow Lady Health Workers to share patient information using SMS technology, track the incidence of disease, and establish the appropriate course of treatment with the support of specialists.
- Remote experiments to support online learning at the Universidad do Sul de Santa Catarina, Brazil. Access to laboratories to conduct experiments is crucial for science and biology students however these are not available at all Brazilian educational institutions. Leveraging the Brazilian government's initiative to provide schools and universities with computer centres and broadband access, this project enables students to perform experiments and to participate in laboratory sessions remotely, greatly enhancing the quality of their education.

More information on the Seed Alliance is available online: **www.isif.asia/seed_alliance**

Policy update

To be presented at APNIC 35

Under discussion on the Policy SIG mailing list

• **prop-106:** Restricting excessive IPv4 address transfers under the final /8 block

Based on observations of the APNIC transfer history log, some LIRs appear to have received delegations under the "final /8" policy using multiple accounts, and then transferred these blocks to a single account. The proposer believes this is against the spirit of the final /8 policy and proposes placing restrictions on such transfers.

• **prop-105:** Distribution of returned IPv4 address (Modification of prop-088)

IPv4 address blocks received by APNIC are added to the final /8 pool and redistributed according to the final /8 policy (prop-088). This policy proposes to define a separate distribution policy for all non-103 IPv4 address blocks in the APNIC pool, to start the distributions once "Global policy for post exhaustion IPv4 allocation mechanisms by the IANA" is activated.

Pending remaining steps of the global policy process

• **prop-097:** Global policy for post exhaustion IPv4 allocation mechanisms by the IANA

This proposal describes the process that IANA will follow to allocate IPv4 resources to Regional Internet Registries (RIRs) after the central pool of addresses is exhausted.

The processes for how IPv4 space may be placed in the IANA Recovered IPv4 Pool is out of the scope of this proposal.

Recently implemented

• **prop-104:** Clarifying demonstrated needs requirement in IPv4 transfer policy

This proposal increases to 24 months, the demonstrated need evaluation period for IPv4 transfer recipients.

• **prop-101:** Removing multihoming requirement for IPv6 portable assignments

This is a proposal to change the "IPv6 address allocation and assignment policy" to allow portable (that is, provider independent or PI) assignments of IPv6 address blocks to be made by APNIC to any organization with due justification and payment of standard fees, removing the current requirement that the requestor is or plans to be multihomed.

Training calendar

COURSES	DURATION	DELIVERY	TITLE	LOCATION
06-Mar-2013	1 hour	eLearning	eIP601 - eLearning: IPv6 Overview	Pacific & Oceania
06-Mar-2013	1 hour	eLearning	eIP602 - eLearning: IPv6 Addressing and Subnetting	South-Eastern Asia
06-Mar-2013	1 hour	eLearning	eIP603 - eLearning: IPv4 to IPv6 Transition	South Asia
13-Mar-2013	1 hour	eLearning	eDNS02 - eLearning: Reverse DNS Procedures	Pacific & Oceania
13-Mar-2013	1 hour	eLearning	eROU03 - eLearning: BGP Basics	South-Eastern Asia
13-Mar-2013	1 hour	eLearning	eSEC02 - eLearning: Cryptography Basics	South-Eastern Asia
13-Mar-2013	2 days and 8 hours	Workshop	WIP601 - Workshop: IPv6	Australia
20-Mar-2013	1 hour	eLearning	eSEC01 - eLearning: Network Security Fundamentals	Pacific & Oceania
20-Mar-2013	1 hour	eLearning	eIP603 - eLearning: IPv4 to IPv6 Transition	South-Eastern Asia
20-Mar-2013	1 hour	eLearning	eSEC03 - eLearning: IPSec	South Asia
20-Mar-2013	2 days and 8 hours	Workshop	WSEC01 - Workshop: Network Security	
			Supported by: Mekongnet	Cambodia
25-Mar-2013	2 days and 8 hours	Workshop	WIP601 - Workshop: IPv6	
			Supported by: APJII	Indonesia
27-Mar-2013	1 hour	eLearning	eIRM03 - eLearning: Best Practices in Managing Internet Resources	Pacific & Oceania
27-Mar-2013	1 hour	eLearning	eIRM05 - eLearning: Introduction to Autonomous System Numbers	South-Eastern Asia
27-Mar-2013	1 hour	eLearning	eIRM08 - eLearning: 4-Byte ASN	South Asia

APNIC eLearning

Interactive Webclasses

training.apnic.net/elearning

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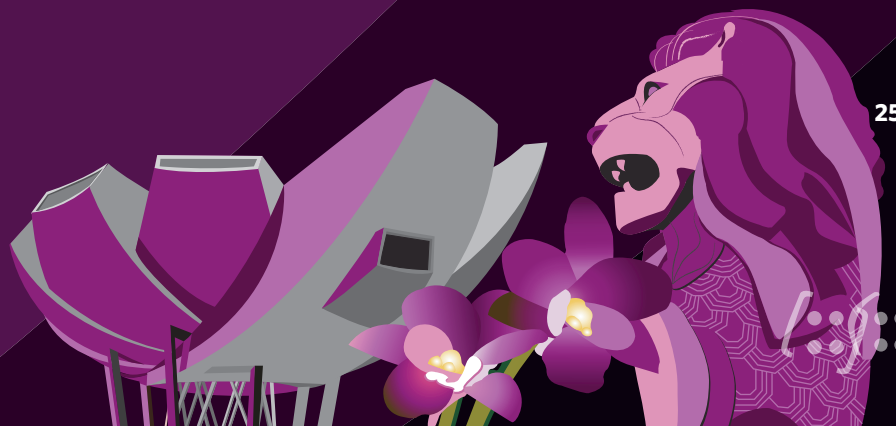

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