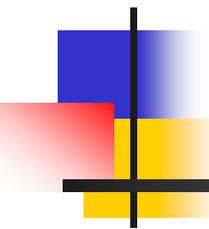
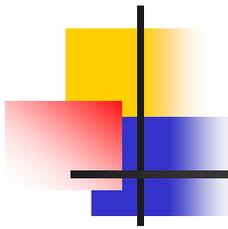


Experimental Internet Resource Allocations

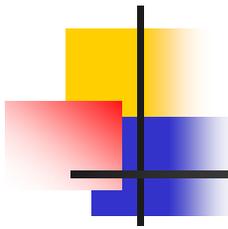


Philip Smith,
Geoff Huston
September 2002



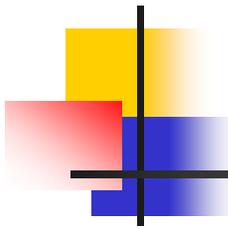
The Objective

- To support the temporary assignment by APNIC of public address space for use within recognized experiments
- Allow deployment experiments in new technologies to proceed without being encumbered with existing policy requirements relating to assignments and allocations



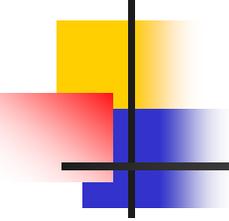
The Proposal

- There is no APNIC policy supporting temporary allocation of addresses to organizations who are undertaking experimental work relating to the deployment of a particular technology
- This is a proposal for such a policy



What is an “Experiment?”

- RFC 1797, Class A Subnet Experiment, 1995
 - Proposed the temporary use of an address block for experimentation in the deployment of Classless Inter-Domain routing
- RFC2471, IPv6 Testing Address Allocation, 1998
 - Proposed the temporary use of IPv6 space in gaining early deployment experience with IPv6 networks (6Bone)



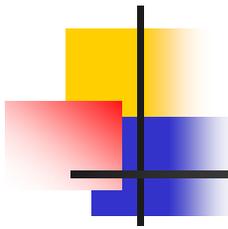
Proposal Details (1)

- Describe the experiment
 - Reference a current Experimental RFC, or
 - Submit an experiment proposal
 - The experiment proposal would normally be made public upon acceptance of the proposal. If disclosure of the experiment is not permitted, than this would preclude experimental allocation

The organisation requesting the resources will have to detail what experimental work they are going to carry out. Such detail can usually be made by either:

- by submitting a proposal that references a current IETF Experimental RFC (Detail Two), or
- by submitting an ‘experiment proposal’ detailing what resources are required, and what activities will be carried out (Detail Three).

Such experimental proposals will, in the normal course of events be made public upon acceptance of the proposal by an RIR. Consideration will be given to non-disclosure constraints, but this is anticipated to be a prohibitive constraint upon the use of public Numbering Resources, even in an experimental context. The RIR will not allocate resources if the entire research experiment cannot be publicly disclosed as per Details Two and Three following.

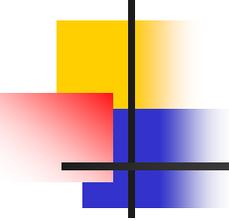


Proposal Details (2)

- Experimental RFCs
 - Experimental RFCs may need to include RIR Considerations to describe the address resources that may be necessary for the experiment This section of an Experimental RFC may require some level of liaison with the RIRs.

The IETF from time to time describes experimental activities and associated requirements for resources that will be required by participants in the experiment. It is considered as being acceptable for the organisation to reference a current Experimental RFC and indicate the organisation's participation in the experiment.

Organisations such as the IETF, who describe experimental activities as part of their standards development process, need to consider the associated Numbering Resource requirements with any proposed experiment, and under this proposal will need to liaise with the RIRs as part of the process of publishing a draft as an experimental RFC.



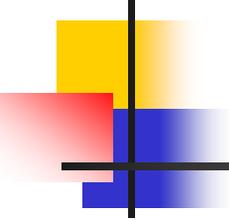
Proposal Details (3)

- Experiment Outcomes
 - Should be published in an openly and freely available document

For experimental proposals not covered by Detail Two, the RIR will require the experiment's aims and objectives to be published in a publicly accessible document.

The RIRs have a strong preference for the use of an Experimental RFC published through the IETF, but will accept other publication mechanisms where the experiment's objectives and practices are publicly and openly available free of charges and free of any constraints of disclosure.

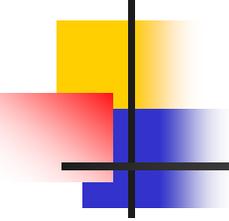
The RIRs would also normally require that the experiment's outcomes be published in an openly and freely available document, again free of charges and free of any constraints of disclosure.



Proposal Details (4)

- Period of Experimental Allocations
 - One year with the potential to renew

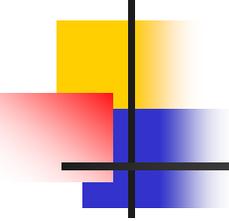
The Numbering Resources are allocated on a lease/license basis for a period of one year. The allocation can be renewed on application to the issuing RIR providing information as per in Detail One. The identity and details of the applicant and the allocated Numbering Resources will be published under the conditions of the RIR's normal publication policy (for example, listed as a temporary allocation in the RIR's database).



Proposal Details (5)

- Additional Allocations
 - Will not be made within the annual cycle

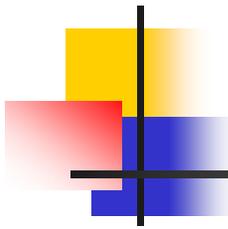
The RIR will make one-off allocations only, on an annual basis. Additional allocations outside the annual cycle will not be made unless justified by a subsequent complete application. It's important for the requesting organisation to ensure they have sufficient resources requested as part of their initial application for the proposed experimental use.



Proposal Details (6)

- APNIC Fee
 - Cover registration and maintenance only

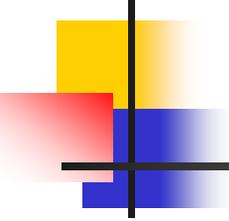
Each RIR may charge an administration fee to cover each allocation made of these experimental resources. This fee simply covers registration and maintenance, rather than the full allocation process for standard RIR members. This administration fee should be as low as possible as these requests do not have to undergo the same evaluation process as those requested in the normal policy environment.



Proposal Details (7)

- Allocation Size
 - Consistent with the experiment and the RIR minimum allocation size.
 - Justification for allocations greater than the minimum size is required

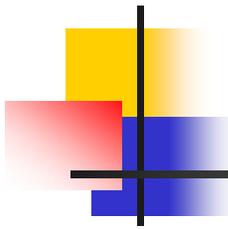
The Numbering Resources requested come from the global Internet Resource space, and are not from private or other non-routable Internet Resource space. The allocation size should be consistent with the existing RIR minimum allocation sizes, unless small allocations are intended to be explicitly part of the experiment. If an organisation requires more resource than stipulated by the minimum allocation sizes in force at the time of their request, they should include in their research proposal why this is required.



Proposal Details (8)

- Not for Commercial Use
 - May be withdrawn immediately if used in a commercial context

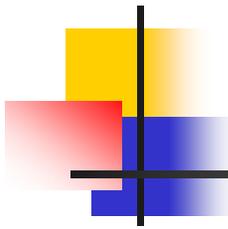
If there is any evidence that the temporary resource is being used for commercial purposes, or is being used for any activities not documented in the original experiment description provided to the RIR, the issuing RIR reserves the right to immediately withdraw the resource and reassign it to the free pool.



Proposal Details (9)

- APNIC to Assess and Comment on Experimental Allocation Proposals
 - May modify a request as appropriate
 - Option of recourse to RIR appeal mechanism in the case of a dispute

The RIRs should be in a position to assess and comment on the objectives of the experiment with regard to the requested amount of Numbering Resources. The issuing RIR should be able to modify the requested allocation as appropriate, and in agreement with the proposer. In the event that the proposed modifications are not acceptable some recourse to either the open policy meeting or some point of appeal and arbitration such as the IETF or other standards body involved with the experiment is necessary.



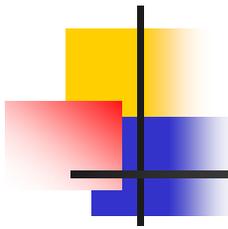
Considerations

- Systematic response to Experimental Requirements
- Use of RIR Considerations section in Experimental RFCs
- Stable basis for future deployment experimentation

Acceptance of this proposal means that the assignment of temporary or experimental Numbering Resources is taken care of by the RIRs, rather than on a more ad hoc or unclear basis as it is at the moment.

It would be helpful to the RIRs is, in conjunction with adoption of this policy, future experimental RFCs include an RIR Considerations section describing the resources required for the experiment, and in full consultation with the RIRs, detailing which resources will be used, if applicable, as well as the anticipated timeframe of the experiment.

A clearly documented policy framework for obtaining Numbering Resources to be used for experimental purposes, with inexpensive cost-recovery based allocations, will ensure a stable and known entry point through the RIRs for future organisations and future developments in the Internet.



Implementation

- Experimental Allocation Proposal to be considered by other RIRs in Q3 2002
- Implementation 3 months after consensus has been reached

It is proposed that each RIRs implement this new policy three months after consensus has been reached. All necessary supporting documents will be prepared by each RIR by the implementation date. This will include updating request and membership applications forms. The community will be informed of the changes in policy through the relevant RIR website and related mailing lists.