1. Number (will be assigned by the RIPE NCC)

2. Policy Proposal Name: ***Run Out Fairly***

3. Authors

a. name: Daniel Karrenberg
b. e-mail: daniel.karrenberg@ipe.net
c. organisation: RIPE NCC

a. name: Niall O'Reilly
b. e-mail: Niall.oReilly@ucd.ie
c. organisation: University College Dublin

a. name: Nigel Titley
b. e-mail: nigel@titley.com
c: organisation: Easynet
            Nigel Titley serves on the RIPE NCC board of directors.

a. name: Randy Bush
b. e-mail: randy@psg.com
c. organisation: IIJ

4. Proposal Version: 1.5
5. Submission Date: 6 April 2009
6. Suggested RIPE Working Group for discussion and publication: Address Policy
7. Proposal type: Modify
8. Policy term: Renewable

9. Summary of proposal

This is a proposal to gradually reduce the allocation and assignment periods in step with the expected life time of the IPv4 unallocated pool in order to address the perception of unfairness once the pool has run out.

The proposal is ***not*** intended to stretch the lifetime of the unallocated pool.

The proposal is independent of other proposals to reserve address space for transition purposes and/or new entrants. It can be implemented independently of these.

10. Policy text (from ripe-449)
a. Current:

5.0 Policies and Guidelines for Allocations

...

The RIPE NCC allocates enough address space to LIRs to meet their needs for a period of up to 12 months.

6.3 Utilisation Rates

Assignments' immediate utilisation should be at least 25% of the assigned space. After one year, this should be at least 50% of the space unless special circumstances are defined.

b. New:

5.0 Policies and Guidelines for Allocations

...

The RIPE NCC allocates enough address space to LIRs to meet their needs for a period of up to 12 months.

Starting on 1 July 2010, a gradual reduction in the allocation period will be applied as follows:

As of 1 July 2010, the RIPE NCC will start allocating enough address space to LIRs to meet their needs for a period of up to nine months.

As of 1 January 2011, the RIPE NCC will start allocating enough address space to LIRs to meet their needs for a period of up to six months.

As of 1 July 2011, the RIPE NCC will start allocating enough address space to LIRs to meet their needs for a period of up to three months.

6.0 Policies and Guidelines for Assignments

The End Users must be assigned with enough address space to meet their needs for a period of up to 12 months.

Starting on 1 July 2010, a gradual reduction in the assignment period will be applied as follows:

As of 1 July 2010, the RIPE NCC or the LIRs will start assigning enough address space to End Users to meet their needs for a period of up to nine months.

As of 1 January 2011, the RIPE NCC or the LIRs will start assigning enough address space to End Users to meet their needs for a period of up to six months.

As of 1 July 2011, the RIPE NCC or the LIRs will start assigning enough address space to End Users to meet their needs for a period of up to three months.

6.3 Utilisation Rates

The utilisation rate of an assignment must be at least 50% of the total space half way through the assignment period applied at the time of the assignment. For example, in the case of a 12-month assignment period, half of the total space assigned must be utilised after six months.

11. Rationale:

In order to avoid possible oversight or confusion, we point out this proposal makes the time periods governing allocations and assignments identical ***immediately*** upon adoption. ***Both*** periods will then be reduced according to a fixed time scheme. The assignment utilisation rate requires 50% utilisation not, as formerly, after one year, but rather at the halfway point of that period and there is no longer a specific target for the immediate utilisation. See below for the rationale behind this.

a. Arguments supporting the proposal

As the RIPE NCC IPv4 unallocated pool runs out, the current policy will allow for the very last allocations to be made for the purpose of deployment up to 12 months afterwards. Once the unallocated pool has in fact run out, there will be some users that just received up to 24 months worth of address space and some who will receive nothing. This will very likely cause concerns because a quite valid perception of this event is that one user will be able to grow their business for another 12 month while the next one in the queue will be stuck. There is a also a real potential for a very large address space user to receive a huge allocation under this policy which pre-empts a lot of requests from smaller users ; this will greatly increase the perception of unfairness. RIPE and our self-governance can very well come under serious adverse criticism when this happens. We will appear to be have been quite careless and short-sighted in the eyes of those who perceive this unfairness. There are some scenarios where a large number of RIPE NCC members will feel this way, as will governments and regulators.

During RIPE 57, one of the authors presented this rationale during the Address Policy Working Group. The presentation, including data about allocation sizes between 2001 and 2007, can be found at: http://www.ripe.net/ripe/meetings/ripe-57/presentations/Karrenberg-The_Very_Last_IPv4_Allocations_Some_Concerns_About_Perceived_Unfairness.ufxZ.pdf

The feedback in that session suggested that this concrete proposal be developed.

The principle of distributing address space according to demonstrated need is sound should not be changed. In order to address the unfairness we propose to reduce the period over which the need is recognised roughly in correlation with the expected life time of the unallocated pool. This addresses the unfairness without abandoning the principle.

The same principle should apply to assignments for both Provider Independent (PI) and Provider Aggregatable (PA) address space for End Users that can be made directly by the RIPE NCC or the LIRs.

The exact date of the exhaustion of the RIPE NCC's IPv4 unallocated pool is hard to predict. It will also be influenced by other policy changes that are currently being discussed. A widely accepted projection of unallocated pool exhaustion dates is published by Geoff Huston, Chief Scientist of APNIC. His projection for the exhaustion of the RIPE NCC pool can be found at
http://www.potaroo.net/tools/ipv4/fig29b.png

The time line proposed here aims to set a schedule that roughly follows these projections and is simple and predictable at the same time. No one can predict the actual point in time when the RIPE NCC pool will be exhausted. We propose not to base policy on changing predictions but rather to decide on a reasonable schedule today that is fixed now and thus predictable.

We stress that this proposal aims to address only the perceived unfairness we outline above. The proposal explicitly does not aim to increase the lifetime of the unallocated pool nor to address any other issue.

The proposal is independent of other proposals to reserve address space for transition purposes and/or new entrants. It can be implemented independently these. In particular there is no inter-dependency with "Use of final /8" (2008-6). The time schedule of this proposal need only be updated if further policy changes drastically change the expected date of exhaustion of the unallocated pool.

Note well that the proposal sets higher allocation rate targets that are consistent with allocation and assignment sizes immediately on adoption. There no longer is a requirement for 'immediate' utilisation of 25%. The rationale for this change is twofold: firstly it aligns both periods which makes application of this policy significantly more straight forward than it would otherwise be; secondly it sets a goals for assignment utilisation half way through the period rather at the beginning and after the fixed period of one year. This is based on feedback from the RIPE NCC registration services staff.

b. Arguments opposing the proposal

Some may argue that reduced allocation and assignment periods will be too short to sustain efficiency in routing and ISP, provider and LIR operations. However, we believe that towards the end of the available IPv4 pool, it is the responsibility of all, to make sure the allocation and assignment of the resources remain perceived as "fair".