American Registry for Internet Numbers

ANNUAL REPORT

January 1, 2003 through December 31, 2003

The American Registry for Internet Numbers
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Chairman's Message

The American Registry for Internet Numbers (ARIN) began its seventh year of operation in December 2003. The organization and the entire Internet community have seen a great deal of attention this year, and this will continue into the year ahead. ARIN's open and transparent processes and its responsiveness to the community's needs have clearly demonstrated the success that is possible through bottom-up industry self-regulation. ARIN's accomplishments have been made possible through the outstanding efforts of its members, the community at large, and its staff.

In 2003, the Regional Internet Registries (RIRs) as a group worked diligently to make available the expertise of their respective communities to the Internet Corporation for Assigned Names and Numbers (ICANN). To that end, we have proposed, developed, and signed a Memorandum of Understanding (MoU) forming the Number Resource Organization (NRO). I am proud to say that ARIN played an important role in the NRO formation process and that the Regional Internet Registries at the ARIN XII meeting in Chicago, Illinois on October 24, 2003 signed the MoU. We believe that the vitality of the individual RIRs and their communities creates, through the NRO, an organization with the experience to address matters of joint interest relating to Internet numbering resources, while providing an efficient interface to other parties interested in these matters. In addition, as the Internet continues to evolve, the NRO will ensure continuity of the operational requirements of Internet resource allocation.

In 2003, the International Telecommunications Union (ITU), on behalf of the United Nations, began the "World Summit on the Information Society" (WSIS). Preliminary meetings were held throughout 2003, and the first phase of a two-phase summit was held in December 2003 in Geneva, Switzerland. WSIS aims to examine and analyze current Internet coordination and administration and make recommendations. ARIN and the other RIRs will be involved in this process through the NRO. ARIN and the other RIRs will also continue to work with ICANN, and will actively pursue the signing of a Memorandum of Understanding between the NRO and ICANN.

This year also saw advances in the creation of a new RIR for the African continent. AfriNIC has chosen the countries in which its offices will be located and appointed a project leader to help shepherd the creation of the RIR and to be involved with the existing RIRs on issues of joint concern.

ARIN worked hard to improve not only its own operations during the year, but continues to invest in the development of registry technology that benefits the global Internet community. And finally, ARIN continues on sound financial footing, and the hardworking staff is constantly looking for ways to provide the services in the most efficient manner.

ARIN looks forward to the accomplishments, changes, and challenges 2004 will bring.

John Curran
Chairman
ARIN Board of Trustees

President's Message

ARIN celebrated its sixth anniversary in December 2003. As in years past, ARIN continued to make improvements and address new challenges, both regional and global in scope.

Registration Services maintained its quick turnaround time for requests and continued to improve its efficiency. It worked to address issues arising from IP hijackings and developed new processes to help prevent them in the future. ARIN's Engineering Department upheld a high level of service, both internally, for ARIN's members, and for the Internet community. In addition, Engineering has been busy on several projects that will provide even greater service in 2004. The Member Services Department worked to facilitate communications with our members and the Internet community through the ARIN website, quarterly newsletters, training materials, and mailing lists. The HR & Administration Department and the Business Department implemented several changes that were instrumental in enhancing the day-to-day operations of ARIN and its long-term financial outlook.

The signing of the Number Resource Organization (NRO) Memorandum of Understanding highlighted ARIN's involvement with the other RIRs and the global Internet community. The NRO will work to address issues shared by the RIRs. There were also several staff exchanges between the RIRs, giving participants insight into how different RIRs operate. ARIN will continue to work closely with the other RIRs and I look forward to communicating the benefits of this coordination in the years to come.

In 2004, a new Internet Resource Policy Evaluation Process will offer a streamlined and even more open and transparent process for policy development. Improvements in security for Internet number resource requests will help ensure the integrity of organization and resource records, as well as the database as a whole. Ratification of new policies developed by the ARIN community will assist us in better meeting the needs of our members.

The active participation by members and Internet community stakeholders like you will always be essential to the success of all of ARIN's activities. Your continued involvement, through the policy development process and your feedback on the services ARIN provides, assures the realization of our goals in the year ahead. All of us at ARIN look forward to working with each of you in 2004.

Thank you,

Raymond A. Plzak
ARIN President and CEO

1. Overview of ARIN

1.1 Mission Statement

"Applying the principles of stewardship, ARIN, a nonprofit corporation, allocates Internet Protocol resources; develops consensus-based policies; and facilitates the advancement of the Internet through information and educational outreach."

1.2 Region

The American Registry for Internet Numbers (ARIN) currently manages the Internet numbering resources for North America, a portion of the Caribbean, and sub-equatorial Africa.

1.3 Organizational Structure and Status

ARIN's organizational structure provides an effective framework for its operation as a service organization responsive to the needs of the public it serves. ARIN is organized and driven by the users in the community as shown below, and is thus able to keep in step with their requirements. The organization's structure remained unchanged in 2003.

2. Activity Reports

2.1 ARIN Departments

Human Resources and Administration Department
The Human Resources and Administration Department, managed by Mary K. Lee, is responsible for personnel acquisition, employee compensation management, benefits administration, payroll administration, employee training, office management, office security, and travel administration.

In Spring 2003, all employees attended a special training session to receive and review the completely revised ARIN Employee Handbook. ARIN staff also attended external classes and seminars in finance, human resources, giving performance appraisals, project management, public key infrastructure, security, and web development tools. In addition, this year all ARIN employees participated in the annual sexual harassment training online. Other training during 2003 included a special in-house class on communication skills for the management team.

The department implemented a formalized compensation management system in 2003. All supervisors received a copy of the Manager's Compensation Handbook. At the end of the year, implementation of the new pay/grade structure commenced with its introduction to the staff.

The department was delighted to see the new company intranet site go live. The internal site contains links to benefits, personnel forms, a new staff calendar, and other useful information. One of the department's goals for 2004 is to make its section of the intranet a popular and useful destination for all ARIN employees.

Business Department
The Business Department, managed by Bob Stratton, is responsible for all financial aspects of ARIN, including billing, budgeting, legal affairs, contracts, and accounting.

The department introduced a collection of overdue accounts process in January. It was greatly successful, as ARIN collected on or closed over 70 accounts during 2003, and this process will continue into the future. The department continues to work closely with legal counsel in dealing with bankruptcies and collections.

In July, ARIN introduced a new price and billing structure for AS number, transfer, and IP end-user maintenance fees. This revised structure consolidates the fees associated with these services and has led some organizations to consolidate their Org IDs in ARIN's database.

In December 2003, ARIN completed a revision of its Registration Services Agreement (RSA). Implementation of the new RSA is expected in early 2004. This new agreement will supersede all previous agreements. In conjunction with this project, the department is working on converting its archived documents to an electronic format to allow for offsite storage of the originals.

The department will continue its work with the emerging AfriNIC registry in 2004 in order to ensure a smooth transfer of functions to the emerging RIR.

Engineering Department
Managed by Ginny Listman, the Engineering Department and its eleven-member staff writes and maintains the code that supports the efforts of registration, business, and member services. The department is responsible for system development as well as equipment maintenance and upgrades required to keep ARIN operational.

Engineering worked to address the needs of the Registration Services Department (RSD) and its customers, as well as the Internet community, by improving many of the currently available tool sets:

- **Improvements in Registration Services:** Engineering introduced a web-based resource history utility that enables research necessary to RSD in combating hijackings and addressing customers' needs. The Engineering Department also worked to improve the data integrity of the WHOIS database through measures that included the automated cleanup of orphaned organizations and POCs, and a mass mailing addressing those organizations whose records did not have appropriate points of contact.

- **Enhancements for ARIN Customers:** Early in 2003, ARIN released web-based versions of the Net-ISP and ASN Request templates to provide an online method of requesting resources. In addition, since many customers receive thousands of confirmations from ARIN over the course of a year, ARIN modified the subject line of auto-response e-mails to indicate whether the template submissions were successful. This change facilitates the customer's ability to focus on rejected templates that need immediate attention.

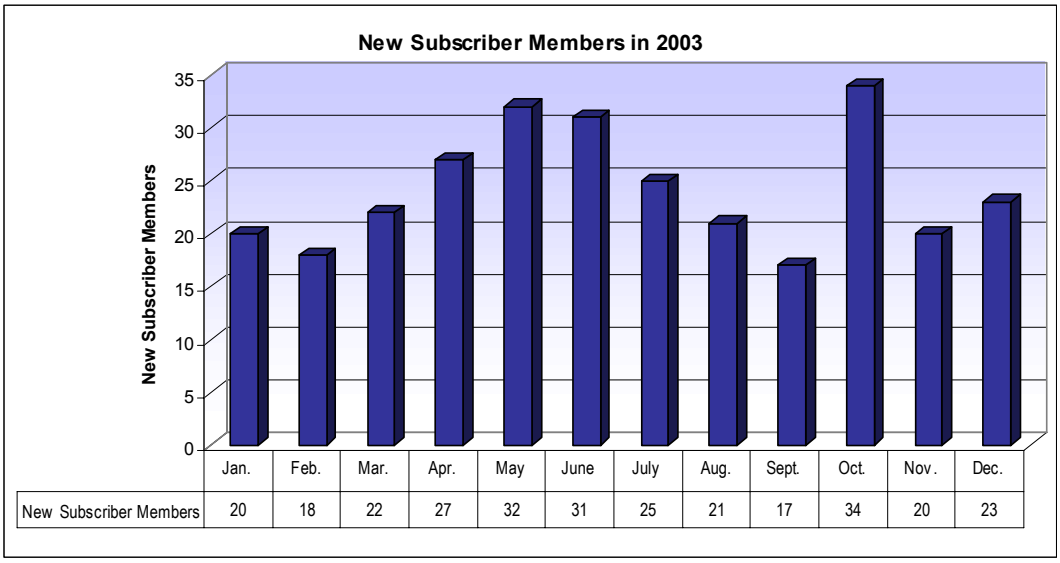
- **Enhancements for Internet Community:** Increased security, regarding the fulfillment of Bulk WHOIS requests, enabled ARIN to include POC information within the data provided. In addition, ARIN made the following modifications to the WHOIS result format: expanded the address fields to include city, state/province, and postal code; all query results now provide postal address information; and introduced the Referral Server field.

- **IPv6 Operations:** ARIN has begun testing its services over an IPv6 network. As of the end of the year, testing included DNS, FTP, and web services.

Member Services Department
The Member Services Department (MSD), managed by Susan Hamlin, is responsible for outreach to the membership and Internet community, management of the design and content of the ARIN website, development of training materials, creation of ARIN documentation, annual election administration and oversight, and event planning for the biannual ARIN Public Policy and Members Meetings.

Membership in ARIN continues to grow slowly with a steady influx of new subscriber members. Subscriber members are Internet Service Providers (ISPs) that automatically qualify for membership upon the completion of their initial allocation request or the transfer of an allocation. ARIN's non-subscriber membership is open to all interested parties for an annual $500 fee. ARIN's total membership at the end of 2003 was 2,018, up from 1,880 in 2002. Membership consisted of 1,967 subscriber members and 51 non-subscriber members.

The following graph shows the number of new subscriber members each month throughout the year.



	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
New Subscriber Members	20	18	22	27	32	31	25	21	17	34	20	23

Initiatives completed in 2003 include:

Website Updates: MSD released a new intranet site for use by ARIN staff. Each department is able to maintain its own intranet pages so that the site remains up-to-date and informative. The widely used site is an important repository for inter-departmental project notes, schedules, and important company-wide administrative and human resource documentation.

Outreach Efforts: MSD published "*ARIN at a Glance*," a two-sided fact sheet that staff and Board members distribute when meeting with outside organizations, international bodies, and government entities.

Training: On-demand training continued to be the focus of ARIN's efforts with the website release of a second computer-based training module and registration process flowcharts.

In April, ARIN released new computer-based training titled "*Querying ARIN's WHOIS,*" a six-module program that provides instruction on optimally structuring ARIN WHOIS queries and interpreting query results. Just fewer than 12,000

individuals used the WHOIS CBT from time of its introduction until the end of the year. It is available online at: http://www.arin.net/library/training/WHOIS_CBT/.

In September, MSD released four interactive flowcharts describing ARIN registration processes. Those new to ARIN resource requests can use these flowcharts to familiarize themselves with each step of the processes involved. Flowcharts are available for ISP initial allocation requests, end-user assignment requests, Autonomous System number (ASN) requests, and Internet number resource transfer requests. Each flowchart begins with relevant policy and guidelines documents and ends with fee payment and renewal information. Clicking the icon links the user to the specific documents relevant to that step.

Well-attended tutorials offered at the spring and fall Public Policy Meetings included sessions on IPv6 vendor implementation and requesting IPv6 address space from ARIN. For the first time, ARIN also offered a BoF (Birds of a Feather) session where attendees could informally present their ideas concerning a proposed change to ARIN Internet number resource allocation policies, or introduce a new policy topic.

Meetings: Memphis, Tennessee was the site of the April ARIN XI Public Policy and Members Meeting. ARIN XII was held in Chicago, Illinois in October. ARIN XII, held back-to-back with NANOG for the second consecutive year, drew the largest attendance ever for an ARIN meeting, with over 200 registrants participating.

Looking ahead to 2004: The department will continue to work on its website review project. The goal is to produce the first major content overhaul since the current site's release in March 2002. A second major initiative is the development of an ARIN Communications Plan with four distinct target audiences: the membership, the public, organizations and government, and the media. MSD staff is also working with ARIN's counsel and the Board of Trustees to streamline the ARIN Bylaws and to create separate documentation covering process and procedural matters of the ARIN Board and staff.

Registration Services Department

The Registration Services Department (RSD), managed by Leslie Nobile, is responsible for the allocation and assignment of all IP resources within the ARIN region. Activities of the group include analysis and registration of IPv4 and IPv6 number requests and Autonomous System number requests, maintaining a help desk, reverse delegation registration, WHOIS Directory Service, and a Routing Registry Service. In addition to these day-to-day activities, RSD is heavily involved in coordinating and working closely with other departments at ARIN on a multitude of special projects.

During the past year, ARIN hired three new IP analysts, for a total of eight IP analysts on staff. All three hires came to RSD from large ISPs and brought with them a great deal of expertise and experience from that community. In 2003, RSD continued to reduce the time it takes to process requests. The department's goal is to continually analyze and improve RSD's internal practices and procedures in order to satisfy the needs of the community as efficiently as possible.

RSD has been involved in several major projects during this past year. One area that received a great deal of attention is the recent phenomenon of hijacked records and resources in the ARIN database. RSD's response to this issue required a significant commitment of time and resources and led RSD to analyze and overhaul its procedures and practices in order to implement more secure methods of evaluating and processing requests.

In conjunction with ARIN's Engineering Department, RSD placed a good deal of focus on database cleanup in 2003. ARIN updated over 3,000 organization records in December, initiated by a message that it sent to the community asking for updated information. Generally, ARIN processes no more than 800 organization record updates in a typical month, so this was considered a very successful cleanup effort.

Another project involving RSD's close coordination with the Engineering Department is the development of new and improved tools to streamline processes and procedures. With the Engineering Department taking the lead, Member Services and RSD have worked to establish a new Cryptographic Authentication (CA) system. RSD's major contributions thus far have been to establish procedures to use in verifying certificate requests from member organizations and the establishment of procedures to use to process requests to revoke, revert, or reestablish these certificates when necessary.

RSD has made a great deal of progress over the last several years in reclaiming unused IP address space and Autonomous System (AS) numbers and returning them to ARIN's available pool of IP resources. In part, this progress is due to users who return unused space to ARIN, either on a voluntary basis or at the request of ARIN staff. ARIN recovered additional space when, through the course of investigating hijackings, RSD found that some legacy space was not only unused and not routed, but that no organization was currently claiming the space. Lastly, through a joint project with the Business Department, RSD has reclaimed space through the process of "revocation," or the recovery of space associated with an organization with outstanding invoices against it that has refused to pay.

This past year proved to be very eventful and challenging, but one with much progress and accomplishment. In 2004, RSD will continue to provide the most efficient and effective customer service to ARIN's community.

2.2 Advisory Council Report

Members

The members of the Advisory Council for 2003 were:

- Dana Argiro[1]
- Ron da Silva
- Bill Darte
- Andrew Dul[2]
- Dale Finkelson[3]
- Avi Freedman
- Sanford George
- Tanya Hinman[4]
- Mark Kosters
- Dawn Martin[5]
- Kevin Martin
- Alec Peterson, Chairman
- Lea Roberts
- John Sweeting
- Stacy Taylor
- Cathy Wittbrodt
- Suzanne Woolf

[1]Dana Argiro was appointed in 2003 to replace Barbara Roseman, who resigned in December 2002
[2]Andrew Dul was appointed to replace Tanya Hinman on March 18, 2003
[3]Dale Finkelson was appointed to replace Dawn Martin on April 7, 2003
[4]Tanya Hinman resigned February 21, 2003
[5]Dawn Martin resigned March 13, 2003

Meetings

The Advisory Council (AC) met at ARIN's biannual meetings in Memphis, Tennessee, and Chicago, Illinois. In addition, they met 7 times via teleconference. The minutes from these meetings are available online at: http://www.arin.net/library/minutes/ac/index.html.

Elections / Resignations

Two AC members, Tanya Hinman and Dawn Martin, resigned in 2003. The Advisory Council appointed Andrew Dul and Dale Finkelson to replace the resigned members. Both were interim appointments and expired on December 31, 2003.

In October 2003, eight Advisory Council seats were up for election. Mark Kosters, Lea Roberts, and Stacy Taylor were re-elected to 3-year terms. Andrew Dul was re-elected for a 2-year term and Kevin Martin was re-elected for a 1-year term. Newly elected members on the Advisory Council are Leo Bicknell (3 years), Robert Seastrom (3 years), and Paul Andersen (1 year). AC members elected in October 2003 begin their terms on January 1, 2004.

Advisory Council Policy Actions

Moved to Recommend Adoption

2002-3: Address Policy for Multi-homed Networks
2002-5: Amnesty Requests
2002-6: Aggregation Requests
2002-8: Privatizing POC Information
2003-3: Residential Customer Privacy
2003-5: Distributed Information Server Use Requirements
2003-12: IANA to RIR Allocation of IPv4 Address Space
2003-13: Six-Month Supply of IP Addresses
2003-14: Remove /13 Maximum Allocation
2003-15: IPv4 Allocation Policy for the Africa Portion of the ARIN Region

Moved to Abandon

2002-7: Micro-assignments for Multi-homed Organizations
2002-9: To allow Micro-Assignments for End-user Organizations (abandoned end of 2002)
2003-1: Required Performance of Abuse Contact
2003-2: Network Abuse
2003-6: Micro-Assignments with Sponsorship
2003-7: Announcement of New ARIN IPv4 Blocks
2003-8: End-user to Subscriber Member Status Change
2003-10: Apply the HD Ratio to all Future IPv4 Allocations
2003-11: Purpose and Scope of WHOIS Directory

Continued to Develop

2002-2: Experimental Internet Resource Allocations
2003-4: IPv6 Policy Changes
2003-9: WHOIS Acceptable Use Policy (AUP)
2003-16: POC Verification

2.3 Board of Trustees Report

Members

The members of the Board of Trustees for 2003 were:

- Scott Bradner, Secretary
- David Conrad
- John Curran, Chairman
- Lee Howard, Treasurer
- Bill Manning
- Ray Plzak
- Bill Woodcock

Officers

Chairman
: John Curran, Vice President of Internet Technology, XO Communications

Secretary
: Scott Bradner, Senior Technical Consultant, Harvard Office of the Provost, Harvard University

Treasurer
: Lee Howard, Senior Manager of Internet Customer Installations, WorldCom, Inc.

President
: Ray Plzak, Chief Executive Officer, American Registry for Internet Numbers

Trustees

- David Conrad, Chief Technology Officer, Nominum, Inc.
- Bill Manning, Partner, EP.NET, llc.
- Bill Woodcock, Research Director, Packet Clearing House

Meetings

The Board of Trustees (BoT) met at ARIN's biannual meetings in Memphis, Tennessee, and Chicago, Illinois. In addition, they met in San Francisco, California in March; Chantilly, Virginia in July; Minneapolis, Minnesota in November; and three times via teleconference. The minutes from these meetings are available online at: http://www.arin.net/library/minutes/bot/.

Elections / Resignations

In October 2003, two Board of Trustees seats were up for election. ARIN members re-elected both Scott Bradner and John Curran to serve additional 3-year terms.

Board of Trustees Policy Actions

Ratified:

2002-3: Address Policy for Multi-homed Networks
2002-5: Amnesty Requests
2002-6: Aggregation Requests
2002-8: Privatizing POC Information
2003-12: IANA to RIR Allocation of IPv4 Address Space
2003-13: 6-Month Supply of IP Addresses
2003-14: Remove /13 Maximum Allocation
2003-15: IPv4 Allocation Policy for the Africa Portion of the ARIN Region

Returned to AC for clarification:

2003-3: Residential Customer Privacy
2003-5: Distributed Information Server Use Requirements

Other Actions

- Approved 2003 Budget
- Approved procedure for appointment of interim member of ASO AC
- Approved an increase in the annual maintenance fees from $30 to $100, effective July 1, 2003. The Board also approved making this a consolidated fee
- Elected officers for 2003: Chair: John Curran; Secretary: Scott Bradner; and Treasurer: Lee Howard
- Confirmed AC's appointment of three interim AC members: Dana Argiro, Andrew Dul, and Dale Finkelson
- Approved privacy statement for website
- Approved “The ARIN Election Conflict of Interest List” and agreed to post the list on the ARIN website immediately
- Approved a modification to its Finance Committee's charter
- Appointed David Conrad to serve on the Finance Committee
- Confirmed the interim appointment of Kim Hubbard to the ASO Address Council
- Approved a definition of the term "current" as related to its use in Article III, Section 3 of the ARIN Bylaws
- Approved changes to the bylaws clarifying the definition of an "ARIN member in good standing" and detailing the rights of ARIN membership

2.4 Public Policy and Members Meeting Reports

ARIN XI
Public Policy Meeting: April 7-8, 2003
Members Meeting: April 9, 2003
Memphis, Tennessee

Over 105 attendees, representing 19 states, the District of Columbia, and 6 countries, enjoyed the hospitality of meeting sponsors NASA and Comcast during ARIN XI.

Public Policy Meeting Report:

Meeting minutes: http://www.arin.net/library/minutes/ARIN_XI/ppm.html

Summaries of the policy discussions are provided in section 4.2 Policy Proposal Discussions and Actions in 2003.

Other Discussion Items:

Proposed Changes to Internet Resource Policy Evaluation Process
Ray Plzak, ARIN President and CEO, presented the history, principles, and milestones of the current process. Scott Bradner, Secretary of the ARIN Board of Trustees, then presented a proposal aimed at improving both the raw process as well as the quality of the proposals sent to the Public Policy Mailing List and presented at the meetings. Following comments and questions from the floor, Bradner stated that a revised proposal would incorporate feedback from the meeting and the mailing lists.

Transfer of 6Bone Address Management Responsibilities
Ray Plzak announced that discussion on this issue has concluded and that 6Bone Address Management responsibilities will not transfer to the RIRs at this time.

Key Signing Key Management
Johan Ihren gave a presentation on the issue of DNSSEC and the possibility of the RIRs signing keys. Discussion among attendees focused on whether it was within the purview of ARIN's mission and the legal and operational impact of the RIRs taking on this role.

ICANN Reform
Lyman Chapin, ICANN Board Member, provided an update on ICANN activities affecting the address community. They included the culmination of the reform process and a return to focusing on ICANN fulfilling its mission. Paul Twomey, President and CEO of ICANN, presented an update on the ICANN Evolution and Reform Process and some insight into where he believes ICANN's future direction lies.

Ray Plzak spoke about ICANN reform from ARIN's perspective. He said that ARIN and ICANN have had intense discussions, and are settling many items and issues. He concluded his remarks with an invitation for attendees to provide any feedback to the ARIN Board members or ICANN guests.

Member Meeting Report:

Meeting minutes: http://www.arin.net/library/minutes/ARIN_XI/mem.html

Key Highlights:

- ARIN department reports
- Advisory Council Chair Alec Peterson reported on the activities of the AC, including a status report on pending policy proposals. He stated that the AC has organized itself to handle the review of policy proposals more efficiently. For example, each policy area is now assigned at least two AC members, and they are tasked with keeping track of it. He added that the AC also adopted a new procedure for the election of its Chair.
- John Curran, ARIN Board of Trustees Chairman, reported on the activities of the Board. The Board has been working on policies to ensure the performance of business in a fair and open manner. Since the last ARIN meeting, the Board has taken six actions regarding Internet resource operations that matched recommendations of the AC. The Board adopted a conflict of interest policy for Trustees, adopted a privacy statement for the ARIN website, and worked to maintain ARIN's positive working relationship with the rest of the Internet community, e.g., ICANN and the other RIRs. He added that ARIN has a stable financial footing and passed a budget for 2003.
- Lee Howard, member of ARIN's Board of Trustees and Treasurer, gave a financial report. He discussed the audit of ARIN's finances and updates on the Finance Committee and the ARIN budget. He stated that the budget increase was due in part to the greater tenure of ARIN staff and an increase in staff positions. Lee stated that renewals have increased steadily and announced that the new maintenance fee of $100 would take effect beginning July 1, 2003.

ARIN XII
Public Policy Meeting: October 22-23, 2003
Members Meeting: October 24, 2003
Chicago, Illinois

ARIN XII had over 200 attendees, representing 26 states, the District of Columbia, and 21 countries. There were 42 first-time attendees. In addition, 123 people attended both the ARIN Public Policy Meeting and NANOG 29, indicating the continued success of these back-to-back meetings. Server Central sponsored much of the network and the terminal for this event.

Public Policy Meeting Report:

Meeting minutes: http://www.arin.net/library/minutes/ARIN_XII/ppm.html

Summaries of the policy discussions are provided in section 4.2 Policy Proposals Discussions and Actions in 2003.

Other Discussion Items:

ICANN Address Supporting Organization Address Council Update
ASO AC Member Kim Hubbard presented the ASO AC status report. Highlights of the report included: the finalizing of the ICANN Board election process; the changing of the ASO AC teleconference schedule from each month to every other month; and information about ongoing projects including the setup of electronic voting and discussion of the NRO draft proposal.

ICANN Update
Barbara Roseman gave an update on ICANN. Her presentation included descriptions of the scope of ICANN activities and information about ICANN's organizational structure and ongoing projects.

NRO Memorandum of Understanding Discussion
Ray Plzak presented a summary of the purpose and structure of the Number Resource Organization (NRO), as well as a timeline of events leading up to this point. The CEO's of the four RIRs signed the NRO MoU at the beginning of this meeting.

Hijacking Report
Leslie Nobile, ARIN Director of Registration Services, made a presentation about the recent IP address space hijackings. Her presentation included ARIN's definition of what constitutes a hijacking, ARIN's efforts to investigate and deal with these issues, and the steps ARIN has taken to combat these incidents in the future.

New Internet Resource Policy Evaluation Process
Scott Bradner, Secretary of ARIN's Board of Trustees, presented the proposed revision of ARIN's Internet Resource Policy Evaluation Process (IRPEP). His report included information on the current process and an explanation of the steps taken in creating a revised version. He also highlighted differences between this proposal

and the proposed revision presented at ARIN XI. A polling of the attendees showed unanimous support for the new process.

Member Meeting Report:

Meeting minutes: http://www.arin.net/library/minutes/ARIN_XII/mem.html

Key Highlights:

- ARIN department reports
- Advisory Council Chair Alec Peterson reported on the activities of the AC and the status of active policy proposals. In addition, he presented information about work by the AC on the issues of a cable discussion group within the ARIN AC, and the recommendation to the Board of Trustees on what issues to consider in regards to key signing key management.
- John Curran, ARIN Board of Trustees Chairman, presented a report on the activities of the ARIN Board of Trustees. Highlights since the last meeting: policies 2003-5 and 2002-6 were ratified and passed to ARIN staff for implementation; continued development of the new Internet Resource Policy Evaluation Process; and ongoing administrative issues. He also announced that the Board decided against involving ARIN in the key signing key management.
- Lee Howard, member and Treasurer of ARIN's Board of Trustees, reported on ARIN's finances. He stated the Board restructured the Finance Committee based on SEC guidelines covering for-profit organizations. Though ARIN is a nonprofit organization, the Board agreed to adhere to guidelines that are more stringent, even though it is not required. The Finance Committee now has the authority to hire and fire auditors and to request a second opinion on an audit of ARIN's books at ARIN's expense. In addition, members of the Finance Committee may not receive compensation from ARIN. In following these new guidelines, the members of the Finance Committee are now Lee Howard, Scott Bradner, and David Conrad. Ray Plzak now serves as a liaison to the Finance Committee. Howard then went on to describe the additional issues the Finance Committee has been working on.

3. Global Activities Report

3.1 AfriNIC Development

Development of a fifth Regional Internet Registry, AfriNIC, to serve the continent of Africa is well underway. ARIN, along with all of the RIRs, is offering assistance to the African Internet community leaders heading this effort. ARIN's service region currently covers 15 African nations, with 29 ISP members.

ARIN participated in a workshop for AfriNIC, hosted by LACNIC in June. Staff shared details of the transition support given to LACNIC, concentrating in the areas of engineering and business plans.

At its September meeting, AfriNIC announced its strategic plans that included the location of its offices and a time table for events leading up to its formal application to ICANN for recognition as an RIR. ARIN staff attending this meeting discussed ARIN IP address policy with the ARIN member ISPs in attendance. The proposed AfriNIC region must develop its own policies, mindful of the three policies currently serving ISPs throughout the continent, as the area is divided amongst APNIC, ARIN, and RIPE NCC.

In the year ahead, ARIN will work closely with appointed AfriNIC transition staff and the ARIN members in Africa in order to affect progress in the development of a self-sustaining registry.

3.2 RIR Coordination Activities

The culmination of many of the joint-RIR activities described below came with the signing of the Number Resource Organization (NRO) Memorandum of Understanding by the RIR CEOs. The signing ceremony took place on the opening day of the ARIN XII Public Policy Meeting on October 24, 2003 in Chicago, IL.

NRO MoU Signing Ceremony at ARIN XII
From left to right: Axel Pawlik, RIPE NCC; Raúl Echeberría, LACNIC; Ray Plzak, ARIN; Paul Wilson, APNIC

The mission of the NRO is to host the common activities necessary for many important aspects of RIR operations. These include the administration of upper level reverse DNS domains, joint-RIR technical coordination, negotiations and agreements with external entities, and provision of a convenient single point of contact with the RIR system by third parties.

Highlights of the coordination efforts are listed below:

- RIRs joint communications to ICANN:
  - March 24, 2003, the RIRs held a meeting with the Government Advisory Committee (GAC) of ICANN. At that meeting, the RIRs delivered a communiqué to the GAC and made a presentation highlighting the communiqué.
  - In July the RIRs published three joint documents:
    - Proposed Open Letter to ICANN from the Regional Internet Registries
    - Proposed Agreement between the RIRs to create the Number Resource Organization
    - Proposed Agreement between the RIRs (acting through the NRO) and ICANN concerning the Address Supporting Organization

    These documents are available at http://www.arin.net/library/rir-docs/
  - October 24, the RIRs submitted the NRO Memorandum of Understanding to ICANN along with a Memorandum of Understanding between the ASO AC and the NRO.

- Continued RIR staff exchanges for cross-training in the registration services area.

- In addition, in 2003 the International Telecommunications Union (ITU), on behalf of the United Nations, began what is called the "World Summit on the Information Society" (WSIS). Preliminary meetings were held in 2002 and continued through 2003. The first phase of a two-phase summit was held in December 2003 in Geneva, Switzerland. WSIS aims to examine and analyze current Internet coordination and administration and make recommendations. ARIN, and the other RIRs, will be involved in this process, both through the Address Support Organization Addressing Council (ASO AC), and through the NRO.

3.3 ICANN Activities

ARIN and the other RIRs will to continue to work with ICANN, and will be actively pursuing the signing of a Memorandum of Understanding between the NRO and ICANN.

Representatives from the ARIN region in 2003 on the Address Supporting Organization Address Council (ASO AC):

Eric Decker
Kim Hubbard*
Mark McFadden

**Kim Hubbard was elected by the ARIN Board of Trustees in January to serve out the remainder of the term vacated by Barbara Roseman in December 2002.*

After the formal election process in the fall, it was announced at ARIN XI that Louis Lee had been elected to fill the ASO AC seat being vacated by Kim Hubbard on December 31, 2003.

3.4 Internet Community Meetings

ARIN seeks opportunities to engage the community in dialogue and provide information to the public on its role as a Regional Internet Registry. ARIN participated in the following meetings throughout the year.

- RIPE 44, Jan 27-31, Amsterdam, NL
- NANOG 27, Feb 9-11, Phoenix, AZ, US
- APNIC 15/ARPICOT 2003, Feb 24-28, Taipei, TW
- IETF 56, March 17-21, San Francisco, CA, US
- ICANN, March 23-27, Rio de Janeiro, BR
- LACNIC IV, April 23-25, Santiago, CL
- RIPE 45, May 12-16, Barcelona, ES
- NANOG 28, June 1-2, Salt Lake City, UT, US
- AfriNIC Workshop, June 2-3, Montevideo, UY
- ICANN, June 22-26, Montreal, CA
- North American Global IPv6 Summit, June 24, San Diego, CA, US
- IETF 57, July 13-18, Vienna, AT
- APNIC 16, August 19-22, Seoul, KR
- RIPE 46, September 1-5, Amsterdam, NL
- AfriNIC, September 17, Johannesburg, ZA
- WSIS PREPCOM 3, September 15-26, Geneva, CH
- NANOG 29, October 19-21, Chicago, IL, US
- ICANN, October 27-31, Carthage, TN
- IETF 58, November 9-14, Minneapolis, MN, US
- LACNIC V, November 18-20, Havana, CU

4. Public Policy Report

4.1 Internet Resource Policy Evaluation Process (IRPEP)

The ARIN Board of Trustees ratifies Internet resource policies only after a full public discussion, a recommendation from the ARIN Advisory Council, and expressed consensus in support of the policy among the community and ARIN membership.

The Internet Resource Policy Evaluation Process governs the steps necessary to adopt a policy proposal, and it is available on ARIN's website at http://www.arin.net/policy/ipep.html.

The Internet Resource Policy Evaluation Process underwent a revision in 2003. The ARIN Board of Trustees, noting the completion of a fair and open evaluation process, adopted the revised Internet Resource Policy Evaluation Process on December 22, 2003. Implementation of the new IRPEP will take place in early 2004, at which time active policy proposals will transfer from the old IRPEP into the new IRPEP at the appropriate stage of the process.

4.2 Policy Proposal Discussions and Actions in 2003

Policy text, mailing list archives, and meeting minutes are available at the following websites:

Policy Proposal Text and Status Reports:
http://www.arin.net/policy/proposal_archive.html

Mailing List Archives:
http://www.arin.net/mailing_lists/

ARIN Public Policy Meeting Minutes:
http://www.arin.net/policy/pol_min.html

Board of Trustees Meeting Minutes:
http://www.arin.net/library/minutes/bot/

Advisory Council Meeting Minutes:
http://www.arin.net/library/minutes/ac/

Policy Proposal Discussion Summaries and Status

2002-2: Experimental Resource Allocations
http://www.arin.net/policy/2002_2.html

ARIN XI Discussion: This proposal was originally posted to PPML for discussion on September 22, 2002. It was first presented at ARIN X and a revised version was presented at ARIN XI. At the meeting, it was stated that APNIC and RIPE NCC implemented similar experimental resource allocation policies in 2003. The community did not support the proposal as written; however, there was support for ARIN to work on this concept with a coordinated effort among the other RIRs and IANA. The AC undertook to continue to work on this issue.

ARIN XII Discussion: The text of this proposal did not change from the previous meeting. There were no comments on the mailing list prior to the meeting. At the meeting there was

near unanimous support for the proposal. The AC decided that there was community support for this proposal, with a few minor revisions needed before posting to last call.

Status as of 12/31/2003: The AC will review the refined text before posting to last call.

2002-3: Micro-Assignments
http://www.arin.net/policy/2002_3.html

ARIN XI Discussion: The community expressed support for a change in this area. The AC formed a discussion group to work on refining the text and will continue to shepherd this proposal.

ARIN XII Discussion: Refined text was posted to PPML, where there was a great deal of discussion; more than 165 posts by 37 different people. Clarification was made that this proposal was for assignments and allocations. Polling at the meeting was in favor of the proposal. The AC determined that the community supported the proposal.

Status as of 12/31/2003: Adopted by the Board of Trustees. The implementation of this policy is pending the ARIN Board of Trustees' review of a new fee schedule that will have an impact on this policy (to be implemented in 2004).

2002-5: Amnesty
http://www.arin.net/policy/2002_5.html

ARIN XI Discussion: This proposal was presented at ARIN X. During last call it was determined that further discussion was needed. The text was refined and presented again at this meeting. In polling attendees, there was nearly unanimous support for this proposal. The AC determined that this proposal had the support of the community.

Status as of 12/31/2003: Adopted by the Board of Trustees. Implemented in 2003.

2002-6: Aggregation
http://www.arin.net/policy/2002_6.html

ARIN XI Discussion: This proposal was presented at ARIN X. During last call it was determined that further discussion was needed. The text was refined and posted to the mailing list. In the polling of ARIN XI attendees there was shown to be unanimous support for this proposal. The AC determined that this proposal had the support of the community.

Status as of 12/31/2003: Adopted by the Board of Trustees. Implemented in 2003.

2002-8: Privatizing POC Information
http://www.arin.net/policy/2002_8.html

Discussion of this proposal took place in 2002.

Status as of 12/31/2003: Adopted by the Board of Trustees. Implemented in 2003.

2003-1: Human Point of Contact
http://www.arin.net/policy/2003_1.html

ARIN XI Discussion: This proposal was presented and discussed in conjunction with Policy Proposal 2003-2. The community did not support the text of this proposal as written; however, there was support for ARIN to be involved in maintaining contacts and verifying presence of abuse contacts in the ARIN WHOIS database. The AC decided to continue to work on this proposal.

Status as of 12/31/2003: Abandoned by the AC along with 2003-2: Network Abuse in favor of putting forth one new proposal (2003-16: POC Verification).

2003-2: Network Abuse
http://www.arin.net/policy/2003_2.html

ARIN XI Discussion: This proposal was presented and discussed in conjunction with Policy Proposal 2003-1. The community did not support the text of this proposal as written; however, there was support for ARIN to be involved in maintaining contacts and verifying presence of abuse contacts in the ARIN WHOIS database. The AC decided to continue to work on this proposal.

Status as of 12/31/2003: Abandoned by the AC along with 2003-1: Human Point of Contact in favor of putting forth one new proposal (2003-16: POC Verification).

2003-3: Residential Customer Privacy
http://www.arin.net/policy/2003_3.html

ARIN XI Discussion: There was a great deal of discussion about WHOIS and privacy issues in general. While ultimately the community did not support the proposal as written, the AC decided to work with the author to refine the text.

ARIN XII Discussion: The AC and the author worked together to refine the text, then reposted it to the Public Policy Mailing List (PPML). Discussion on PPML and at the meeting focused on the issues of privacy and accountability. The ratio of those in favor at the meeting, as demonstrated by a poll, was just under five to one. The AC concluded that this proposal had the support of the community.

Status as of 12/31/2003: The AC recommended that the Board of Trustees adopt this proposal. The Board remanded the proposal to the AC for clarification.

2003-4: IPv6 Policy Changes
http://www.arin.net/policy/2003_4.html

ARIN XI Discussion: While some members of the community expressed the desire to move forward with this proposal, others spoke in favor of continuing with a globally common policy for IPv6. The AC decided that further discussion was necessary.

ARIN XII Discussion: The text of this proposal had not changed from ARIN XI. The AC determined that the community did not support moving forward with this proposal, but did support having the AC continue to work on it.

Status as of 12/31/2003: The AC is keeping this policy as a placeholder until the time that it intends to abandon this proposal in favor of putting forth component parts as new individual policy proposals.

2003-5: RWhois Server Use Requirements
http://www.arin.net/policy/2003_5.html

ARIN XI Discussion: The community supported the idea of ARIN implementing an RWhois requirements policy. The AC noted that substantive comments were made about this proposal at the meeting and during last call, and agreed to refine the text and return it to the mailing list for further discussion.

ARIN XII Discussion: Refined proposal text was posted to PPML for discussion on September 22, 2003. There were no substantive comments on the mailing list. It was mentioned during the meeting that use of the word 'RWhois' should be replaced with 'distributed information server.' The AC agreed to that and made a few other minor refinements. The AC determined that there was community support for this proposal.

Status as of 12/31/2003: The proposal was tabled by the Board of Trustees for a future meeting pending the results of the clarification with the AC about 2003-3.

2003-6: Micro-Assignments with Sponsorship
http://www.arin.net/policy/2003_6.html

ARIN XI Discussion: While the community was agreeable to micro-assignments in general, the community did not support sponsorship. Another proposal, 2002-3, is concerned with making smaller assignments. The AC abandoned 2003-6 with the condition that discussion and feedback about 2003-6 be incorporated into the review of 2002-3.

Status as of 12/31/2003: Abandoned by the AC with the condition that the content and feedback from the discussion related to this policy proposal be incorporated into the review of Policy Proposal 2002-3.

2003-7: Announcement of New ARIN IPv4 Blocks
http://www.arin.net/policy/2003_7.html

ARIN XI Discussion: The community accepted that the level of notification about new ARIN IPv4 blocks was sufficient. The community did not support this proposal and it was abandoned by the AC. The AC decided that the content and feedback from the discussion related to this policy proposal would be incorporated into the AC's review of IANA functions as they relate to RIRs.

Status as of 12/31/2003: Abandoned by the AC with the condition that the content and feedback from the discussion related to this policy proposal be incorporated into the AC's review of IANA functions as they relate to RIRs.

2003-8: End-User to Subscriber Member Status Change
http://www.arin.net/policy/2003_8.html

ARIN XI Discussion: It was stated that it is already ARIN practice to allow end-users to change their status to subscriber members. The community did not support the proposal

and the AC abandoned it. The AC requested that ARIN notify the AC if there are any problems with abuse of the existing process.

Status as of 12/31/2003: Abandoned by the AC. The AC requested that ARIN notify the AC if there are any problems with the issue of abuse of this process.

2003-9: WHOIS Acceptable Use
http://www.arin.net/policy/2003_9.html

ARIN XI Discussion: While the community did not support the proposal text as written, there was support for working towards a single unified WHOIS acceptable use policy. The AC continued to shepherd this proposal.

ARIN XII Discussion: A refined version of this proposal was posted to the PPML for discussion shortly after ARIN XI. The community stated its support for the adoption of a uniform AUP for all WHOIS data. The AC decided to continue to shepherd this proposal.

Status as of 12/31/2003: The AC recommended that the ARIN Board of Trustees adopt a uniform AUP for all WHOIS data. The proposal is under review by legal counsel.

2003-10: Apply the HD Ratio to all Future IPv4 Allocations
http://www.arin.net/policy/2003_10.html

ARIN XII Discussion: This proposal was introduced on PPML on August 21, 2003. There were 9 posts by 5 different people. The AC found that the community did not support this proposal. However, the community did support the review of different thresholds for utilization for organizations with different amounts of address space. The AC abandoned the proposal due to lack of community support but did form a discussion group to review the utilization requirement issue.

Status as of 12/31/2003: Abandoned by the AC.

2003-11: Purpose and Scope of the WHOIS Directory
http://www.arin.net/policy/2003_11.html

ARIN XII Discussion: This proposal was introduced on PPML on August 21, 2003. The subject of WHOIS output generated much discussion; there were at least 31 posts by 12 different people on the mailing list. While there was good discussion at the meeting, there was not overall support from the community. The AC abandoned this proposal due to lack of community support.

Status as of 12/31/2003: Abandoned by the AC.

2003-12: IANA to RIR Allocation of IPv4 Address Space
http://www.arin.net/policy/2003_12.html

ARIN XII Discussion: This proposal was introduced on PPML on September 22, 2003. It was clarified that following discussion in all four RIR regions, the proposal and discussion results would be forwarded to the ICANN ASO Address Council for review. A poll was taken at the meeting and all were in favor of this proposal. The AC determined that this proposal had community support.

Status as of 12/31/2003: Adopted by the Board of Trustees. The policy will be forwarded to the ASO AC for consideration.

2003-13: Six Month Supply of IP Addresses
http://www.arin.net/policy/2003_13.html

ARIN XII Discussion: This proposal was introduced on PPML on September 12, 2003. There was a unanimous show of hands in favor of this proposal. The AC determined that the community supported this proposal.

Status as of 12/31/2003: Adopted by the Board of Trustees. Implementation to occur in January 2004.

2003-14: Remove /13 Maximum Allocation
http://www.arin.net/policy/2003_14.html

ARIN XII Discussion: This proposal was introduced on PPML on September 12, 2003. All who participated in the polling at the meeting were in favor of this proposal. The AC determined that the community supported this proposal.

Status as of 12/31/2003: Adopted by the Board of Trustees. Implementation to occur in January 2004.

2003-15: IPv4 Allocation Policy for the Africa Portion of the ARIN Region
http://www.arin.net/policy/2003_15.html

ARIN XII Discussion: This policy proposal was introduced to PPML on September 22, 2003. This proposal generated more discussion on the mailing list than any of the other proposals presented at this meeting. There were hundreds of posts by more than fifty different people on the list. A poll was conducted at the meeting, and an overwhelming majority were favor of the proposal. The AC decided that this proposal had the support of the community.

Status as of 12/31/2003: Adopted by the Board of Trustees. The implementation of this policy is pending the ARIN Board of Trustees' review of a new fee schedule that will have an impact on this policy (to be implemented in 2004).

2003-16: POC Verification
http://www.arin.net/policy/2003_16.html

ARIN XII Discussion: This proposal was a result of the AC abandoning proposals 2003-1 and 2003-2 and creating one new proposal that incorporated the comments and discussion regarding the abandoned proposals. The AC found community support to refine the text and shepherd the proposal.

Status as of 12/31/2003: Revised text is to be presented to the AC at its next meeting.

4.3 Working Group Actions

IPv6 Working Group

Archives: http://www.arin.net/mailing_lists/v6wg/

At ARIN XI, IPv6 Working Group Chair Thomas Narten provided a description of the proposed changes to ARIN's current IPv6 policy. He stated that the basis for these changes was the experience of implementing joint-RIR policy. The Chair went on to say that the current policy has been in place for almost a year and that the changes in proposed policy are for clarification and cost reduction. At the meeting, there was discussion to form an editorial committee to address this proposal and to continue dialogue on the global IPv6 mailing list.

At ARIN XII, Narten's presentation focused on Policy Proposal 2003-4: IPv6 Policy Changes. He said that there had been some follow-up discussion within the ARIN Advisory Council. He then went on to propose the abandonment of the current proposal as a whole, requesting that parts of it be pursued through the global-v6 mailing list or within ARIN as appropriate.

Database Working Group

Archives: http://www.arin.net/mailing_lists/dbwg/

At ARIN XI, Ginny Listman, DBWG Working Group Chair and ARIN Director of Engineering, introduced reports on the status of lame delegations, an update from the RWhois Redesign Team, the Common Registry Information Service Protocol (CRISP), the status of the Early Registration Transfer (ERX) project, proposed WHOIS display changes, and ARIN's processes of notification concerning resource requests. She noted that more POCs are needed on ORG records, as downstreams will be required to have POCs after May 1, 2003. The DBWG report finished with a presentation by ARIN staff on the future of cryptographic authentication at ARIN. The Chair referred attendees to dbwg@arin.net for future details on these issues.

Consensus was reached on the following issues:

- The current method of RWhois notation in the comment field is not sufficient and ARIN should store this information in a more structured manner. The issue of where to store the information was referred to ARIN staff.
- A small majority of those expressing a preference voiced support for ARIN displaying the upstream POCs for simple reassignments.

At ARIN XII, Ginny Listman presented an update on the ongoing DBWG projects and introduced reports on the implementation of cryptographic authentication at ARIN, and the use of the Referral Server field.

RTMA

Archives: http://www.arin.net/mailing_lists/rtma/

RTMA Working Group Chair Cathy Wittbrodt gave a presentation at ARIN XII and asked attendees to think about the future of the RTMA working group and send

comments to the RTMA mailing list. She suggested disbandment of the group if there was consensus that there were no issues for the group.

RFC 2050
Archives: http://www.arin.net/mailing_lists/2050-wg/

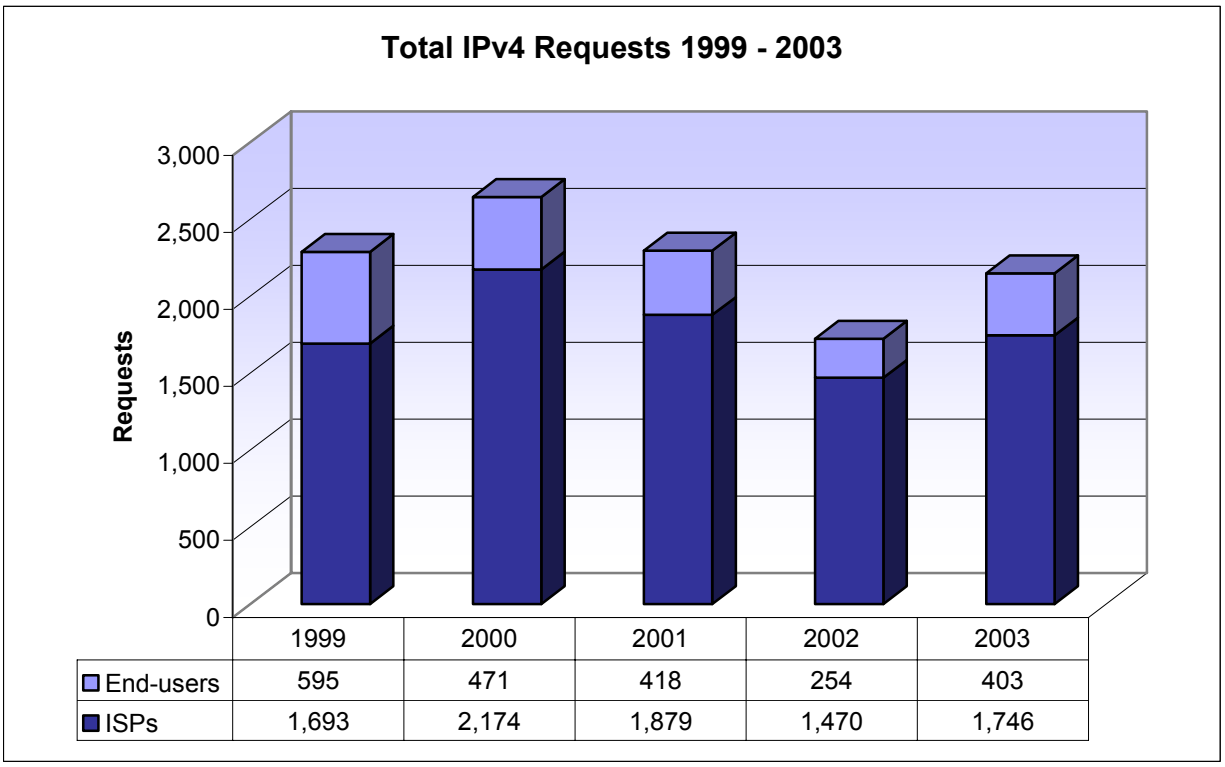
In 2003, Working Group Chair Mark McFadden presented updates at both of ARIN's Public Policy Meetings. During his presentation at ARIN XII, the Chair stated that analysis of RFC 2050 and the RIR Policy Comparison Matrix (PCM) identified four categories of information:

- RIR Policy Items in PCM and RFC 2050
- RIR Policy Items in PCM, but not in RFC 2050
- Policy Related Items in RFC 2050, but not in PCM
  - Non-disclosure practices
  - Appeals procedures
- Descriptions for 1996 Best Current Practices

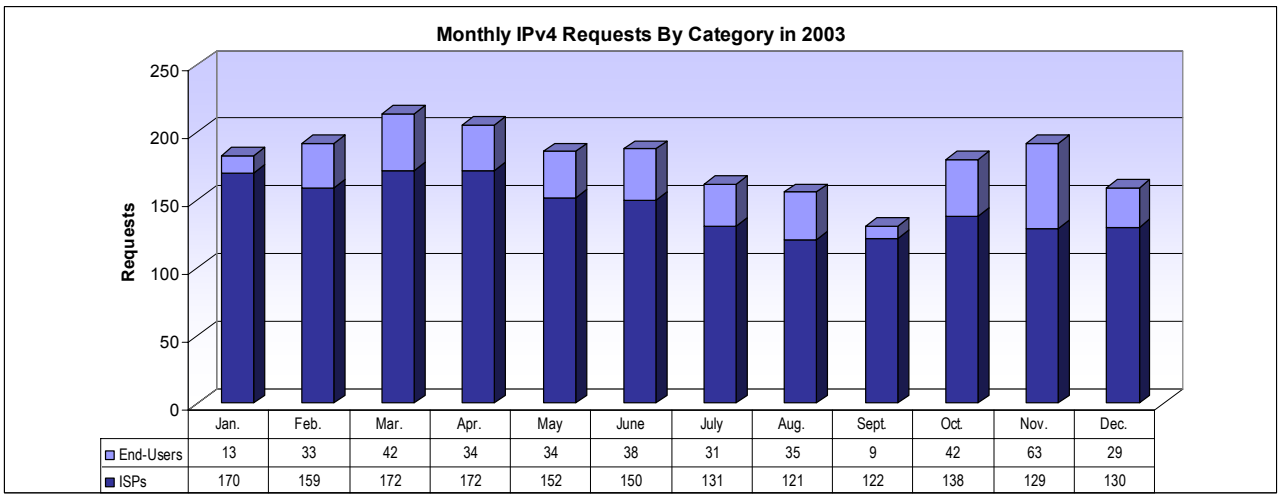
The Chair proposed a path for future action to include writing an informational draft RFC to change the status of RFC 2050 to "Historical." This informational draft would refer to current RIR policy documentation as well as the RIR policy proposal evaluation processes. This would culminate in the disbanding of the RFC 2050 Working Group. During discussion at ARIN XII, a meeting attendee commented that the new informational draft should explain why it is important to change RFC 2050 to a historical document.

Appendix I - Registration Statistics

IPv4 Requests for 2003



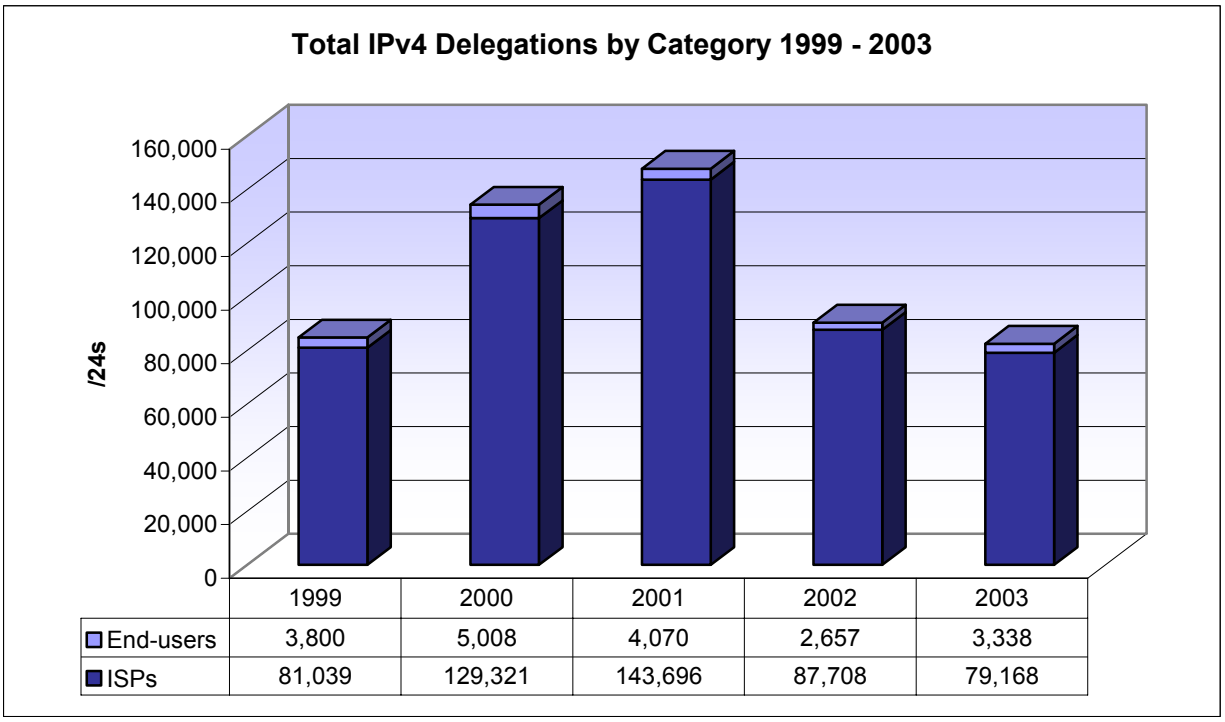
	1999	2000	2001	2002	2003
End-users	595	471	418	254	403
ISPs	1,693	2,174	1,879	1,470	1,746



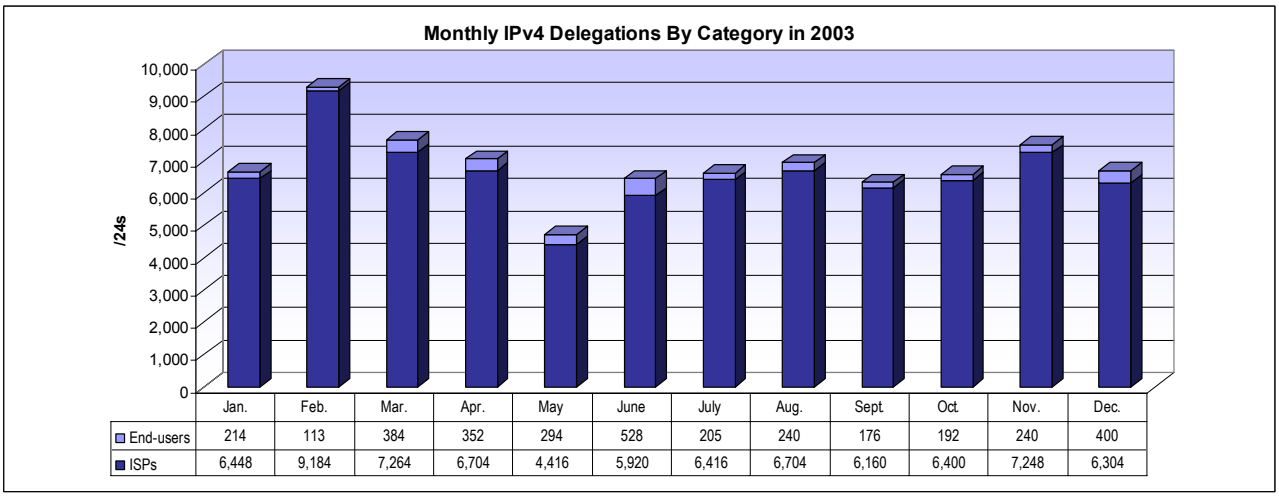
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
End-Users	13	33	42	34	34	38	31	35	9	42	63	29
ISPs	170	159	172	172	152	150	131	121	122	138	129	130

IPv4 Delegations for 2003

/24 (class C) equivalents are used as the "common denominator" for measuring the larger (/19s, /16s, etc.) networks that ARIN actually delegates. One /19 equals 32 /24s. One /16 equals 256 /24s.

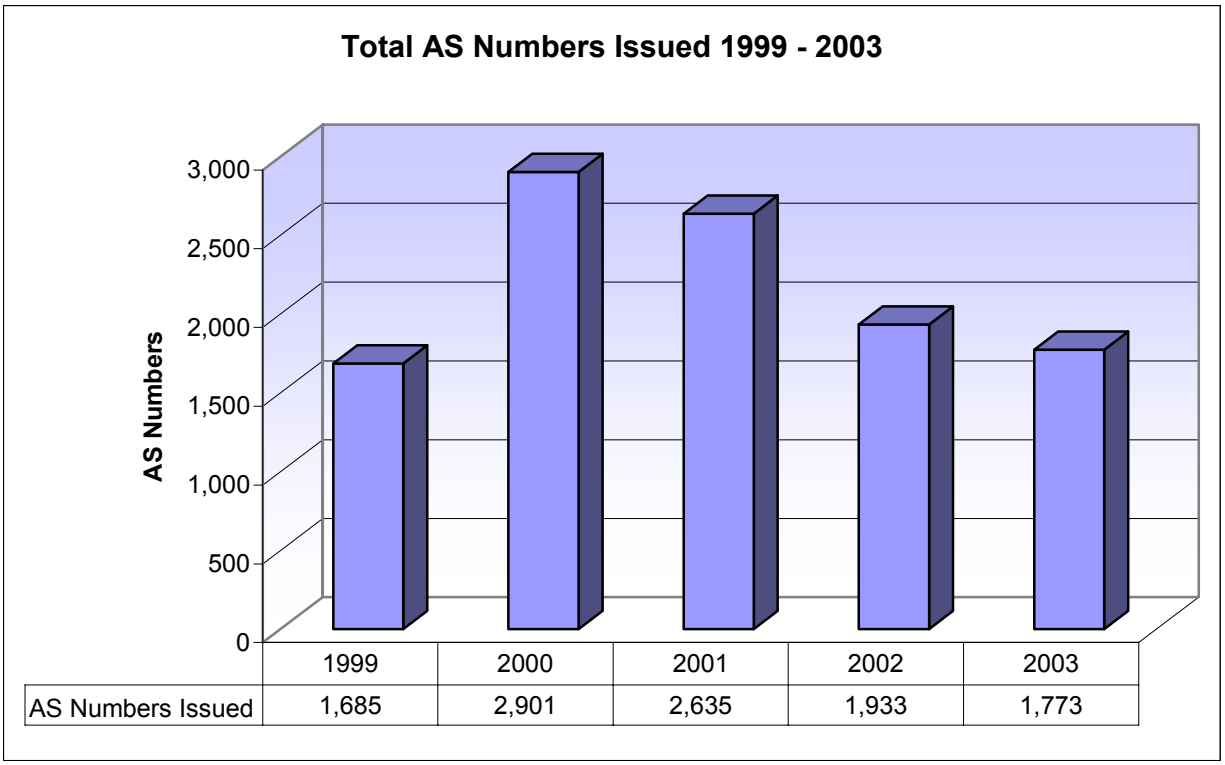


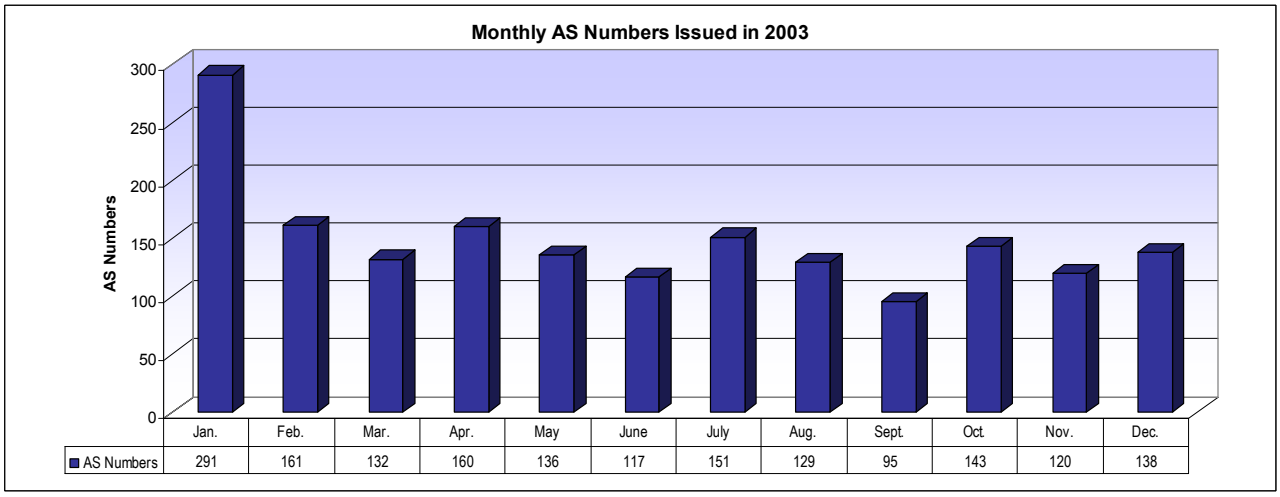
	1999	2000	2001	2002	2003
End-users	3,800	5,008	4,070	2,657	3,338
ISPs	81,039	129,321	143,696	87,708	79,168



	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
End-users	214	113	384	352	294	528	205	240	176	192	240	400
ISPs	6,448	9,184	7,264	6,704	4,416	5,920	6,416	6,704	6,160	6,400	7,248	6,304

AS Numbers


Total AS Numbers Issued 1999 - 2003
AS Numbers
3,000
2,500
2,000
1,500
1,000
500
0
1999
2000
2001
2002
2003
AS Numbers Issued
1,685
2,901
2,635
1,933
1,773


Monthly AS Numbers Issued in 2003
AS Numbers
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250
200
150
100
50
0
Jan.
Feb.
Mar.
Apr.
May
June
July
Aug.
Sept.
Oct.
Nov.
Dec.
AS Numbers
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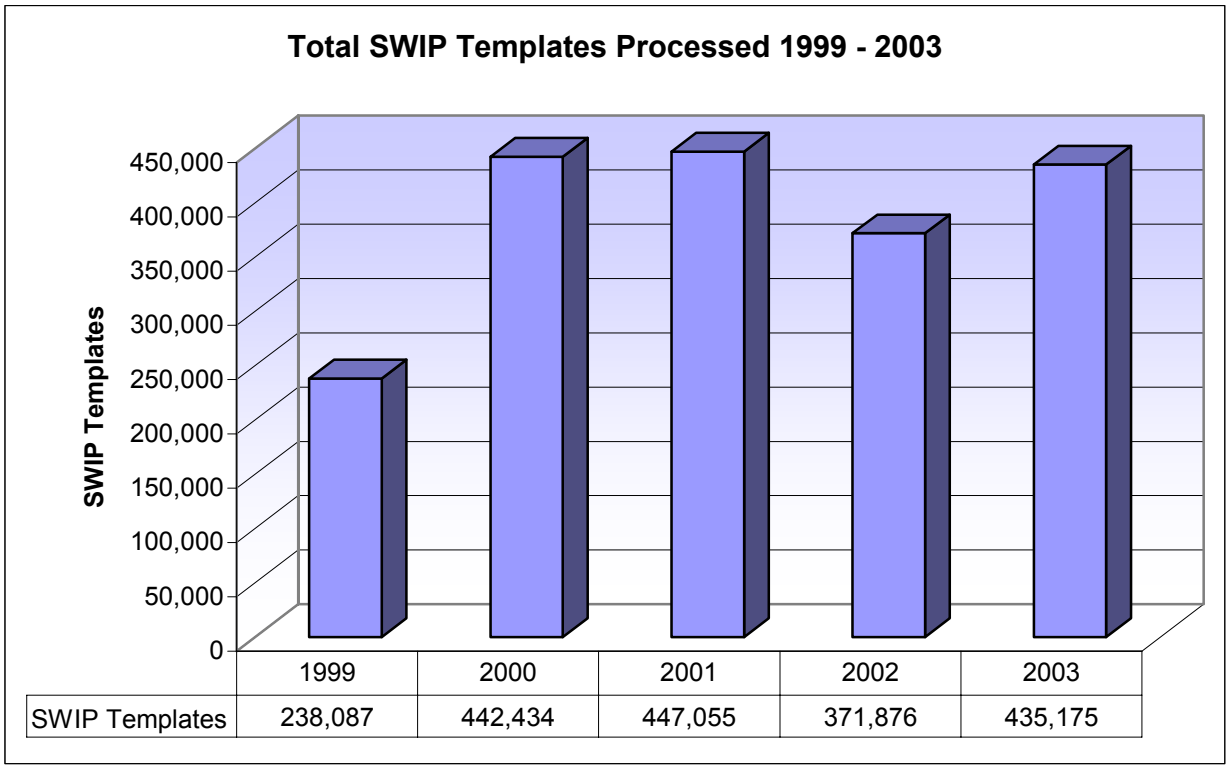
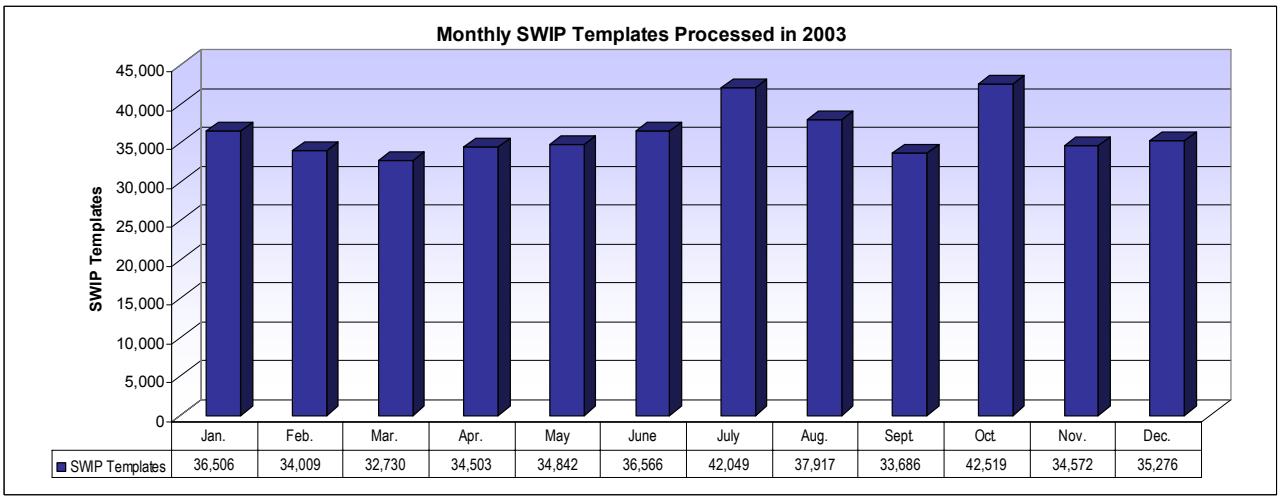
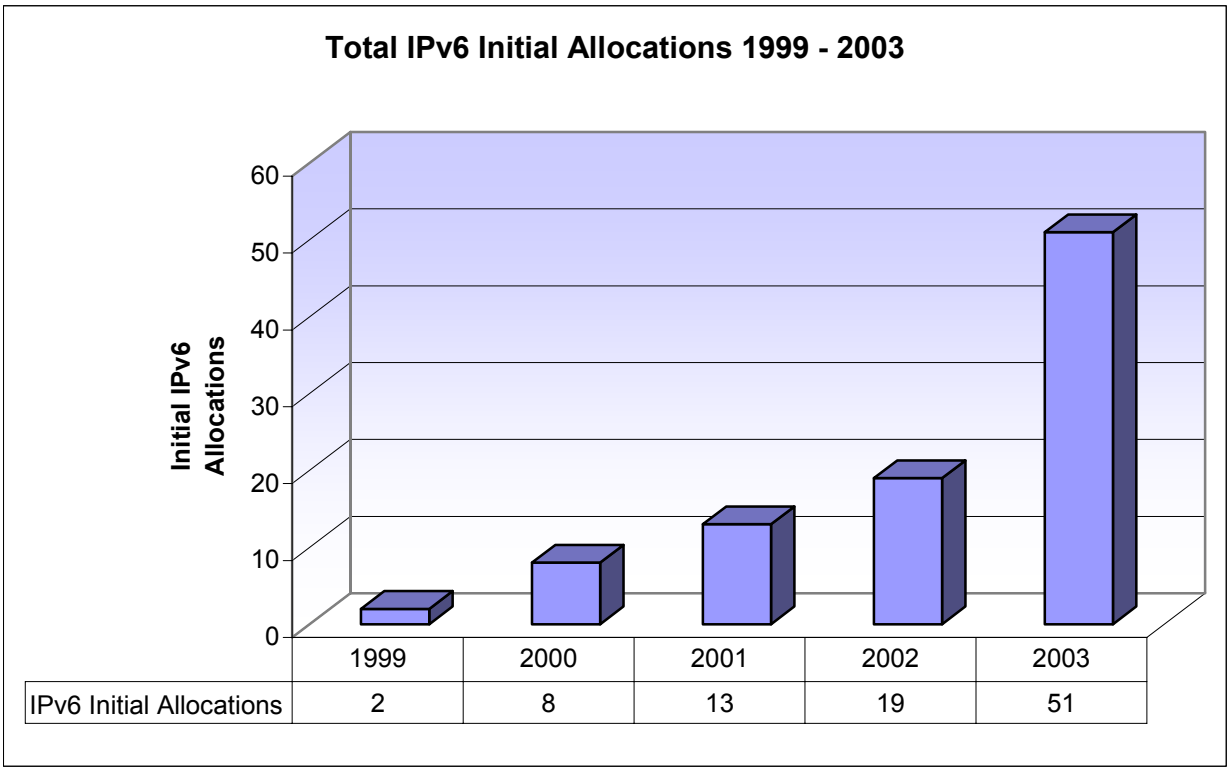
160
136
117
151
129
95
143
120
138

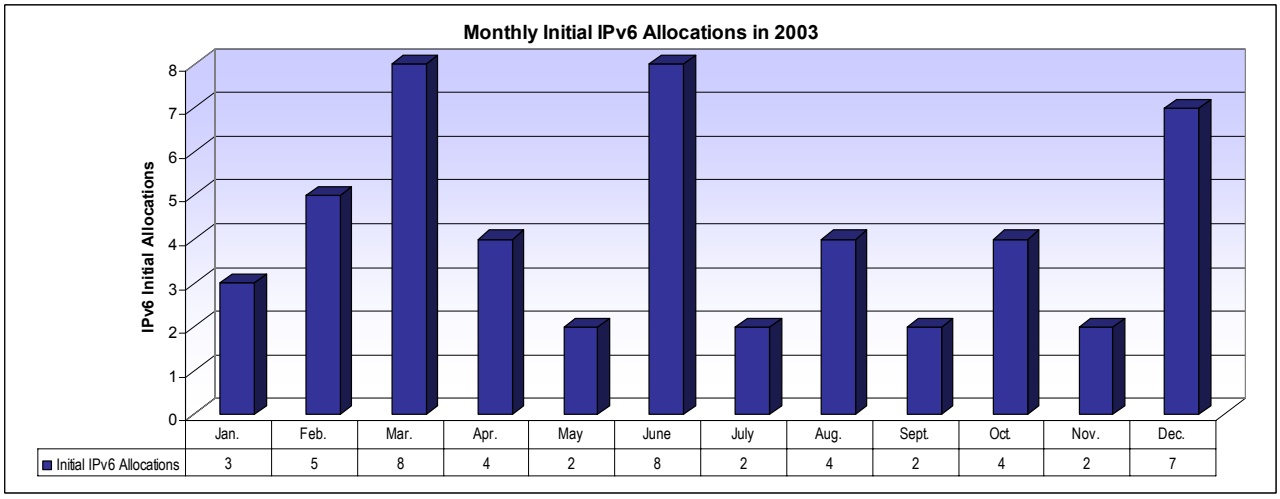
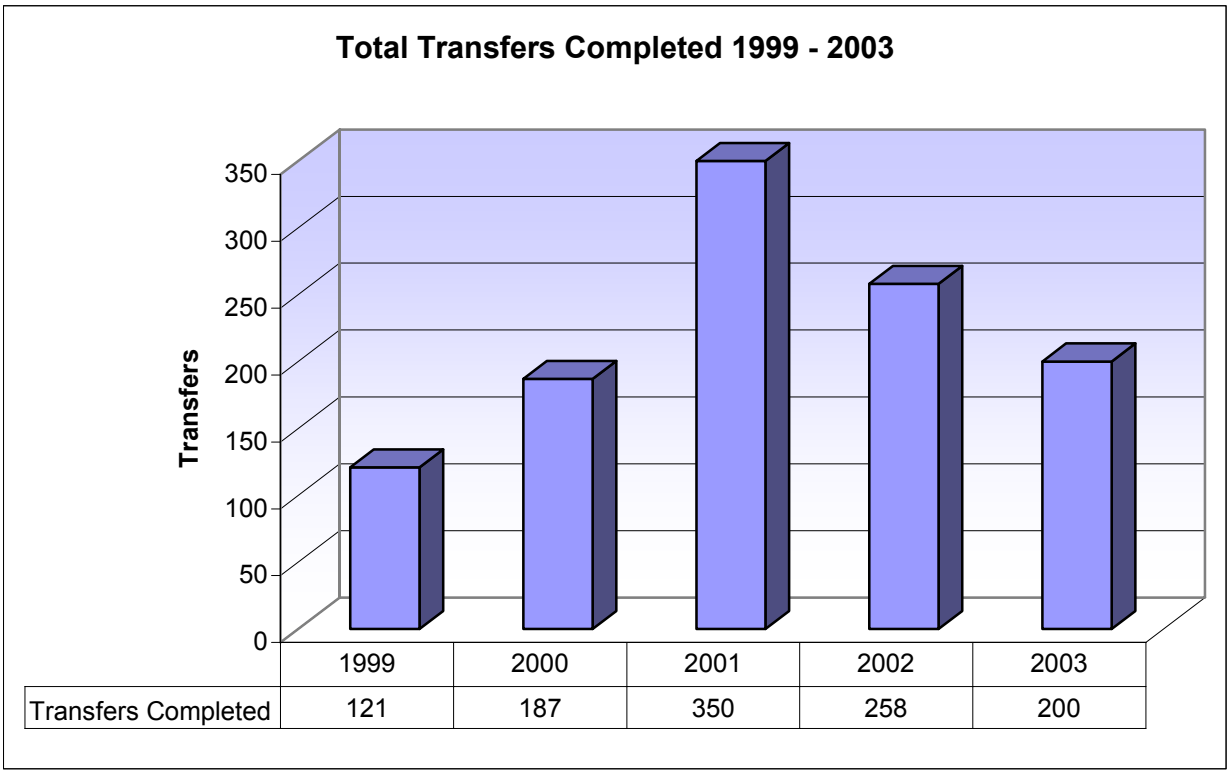
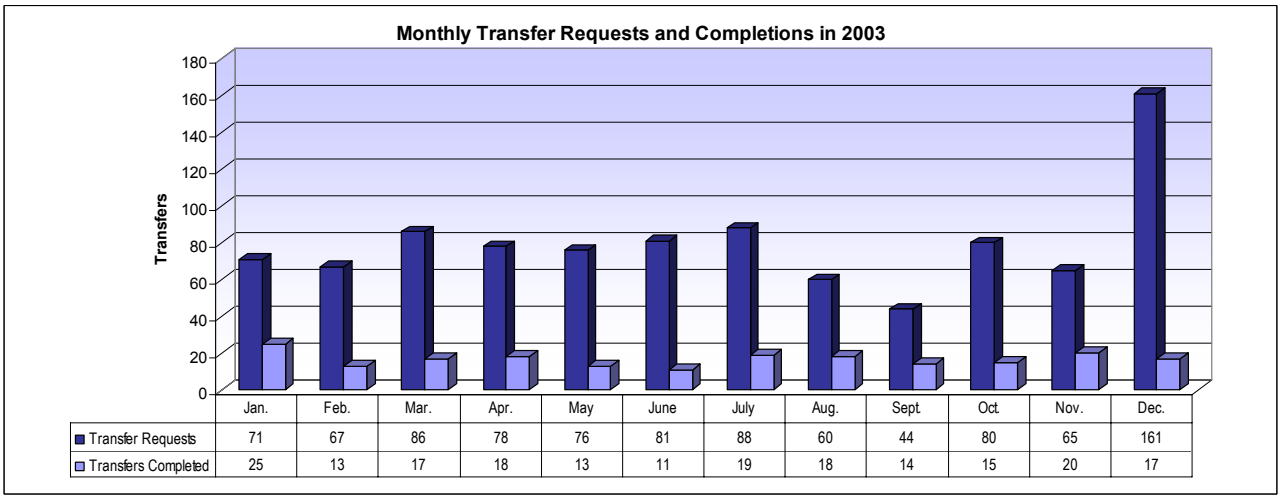
SWIP Templates





IPv6 Initial Allocations





Transfer Requests and Completions