APPENDICES

APPENDIX A
THE PATENT APPLICATION MANAGEMENT (PAM) SYSTEM

This appendix summarizes the PAM concept.

I. Introduction

A. Current systems and procedures

The manual procedures and automated systems of the U.S. Patent and Trademark Office (USPTO) upon which patent application operations now depend are costly and becoming obsolete. These procedures and systems were developed in the 1970s and earlier, and are not flexible or powerful enough to provide needed improvements. The USPTO will likely become more and more vulnerable to disruptions in operations and related problems if these current systems and procedures are not replaced.

B. Congressional mandate for USPTO modernization

Public Law 96-517 directed the USPTO to prepare a plan for modernizing its patent examination, issuance, and dissemination operations. The USPTO has successfully completed much of this modernization by developing other Automated Patent System (APS) subsystems. The APS Examiner Search subsystem automated the search and dissemination of electronic copies of allowed patents. Personal computers and telecommunications networks have been installed and are now being successfully used to satisfy many requirements of the APS Office Automation subsystem. PAM is the next major step in the USPTO's on-going modernization.

C. PAM is the next step in patent application modernization

Automation has permeated the entire patent community. Most patent applications are now being prepared using computers that produce an electronic copy of the data and could be used to process and examine the application, as well as to photocompose and disseminate allowed patents. The USPTO and patent applicants now use computers to generate and track the correspondence and other application processing actions. Since applicant entry and USPTO processing of application data are now partially automated, PAM is the logical next step towards total automation. Electronic filing and processing offers the USPTO and patent applicants ways to reduce redundancy, errors, and delays in the handling of paper applications.

II. Overview of the PAM System

The objective of the PAM project is to obtain an automated information system that will allow the USPTO to accept and process patent applications electronically. The PAM system will supplement and eventually replace the paper applications and manual procedures that the USPTO has used since its inception.

A. Requirements

The following table lists and describes the ten PAM functions, and the current operations or status of each. The functions generally correspond to the work flow of patent applications.

Function	*Description*
1. Document Conversion	Accept electronically submitted patent applications and convert paper application to electronic format and media. Note, the term "applications" includes original applications and all amendments.
2. Fee Processing	Electronically verify fee calculations and process payments.
3. Application Administration	Perform administrative processing of application before it is submitted to Examining Corps.
4. Examiner Processing	Provide for completely automated processing of all Examiner activity, including interface to the APS Examiner Search Subsystem and the ability to electronically reconstitute the complete application.
5. Issue Build	Prepare allowed applications for publication in the Official Gazette and for final printing as patents.
6. Photocomposition	Photocompose final allowed patent for patent printing.
7. File Repository	Create files and archives for copies of all applications and USPTO actions.
8. Application Docketing and Status Monitoring	Monitor flow of applications through the USPTO, and provide management and status reports.
9. Security	Protect system and data against unauthorized access, disaster, and other security risks.
10. Maintenance	Ensure continuation of system services to all users, enhance system to satisfy evolving requirements, and infuse new technology.

B. Boundaries and Conditions

The PAM target architecture includes reliance on the USPTO infrastructure systems such as existing mainframe computers and peripherals, networks, and personal computers. PAM will provide interfaces to existing systems such as the APS Examiner Search subsystem and to external modules such as the patent application Authoring Program now being developed. PAM security and maintenance functions will be handled by employing proven standards and techniques. Alternative boundaries and conditions will be explored.

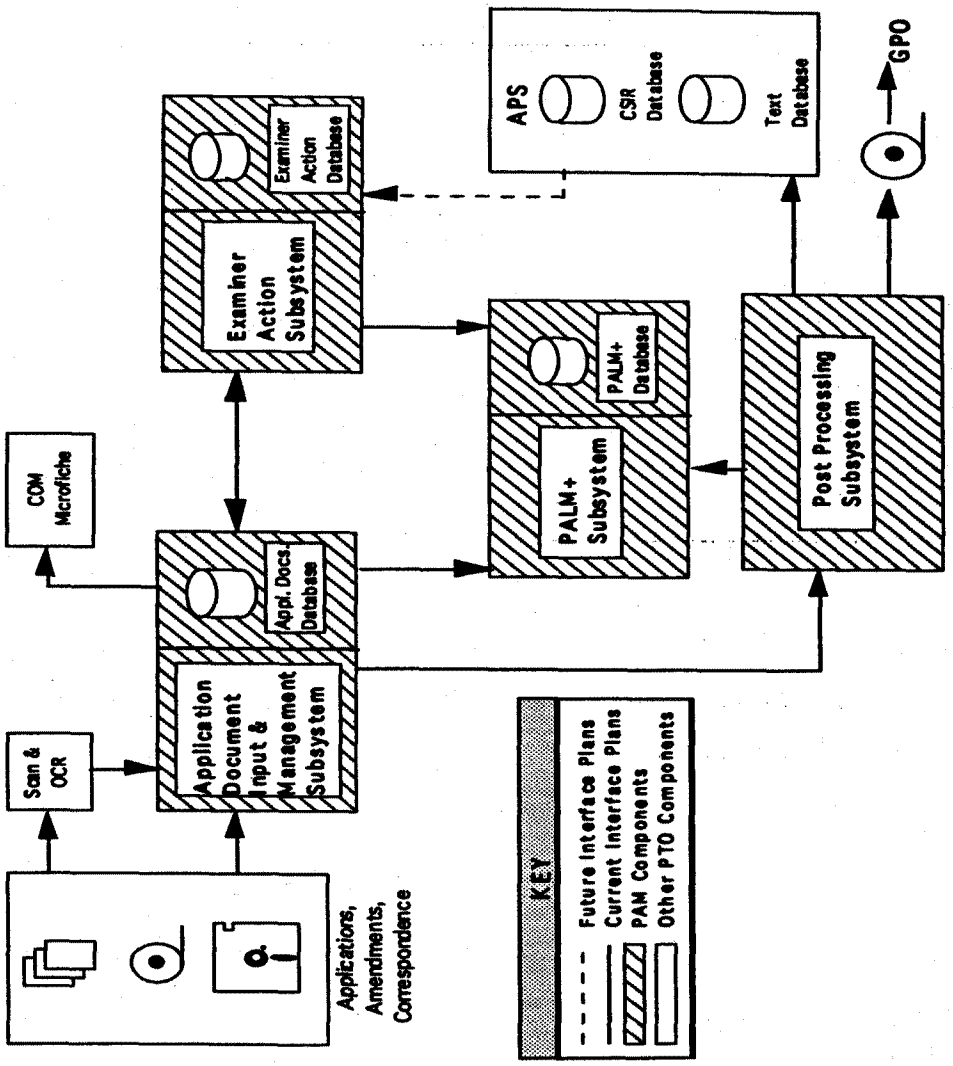
C. Concept of Operations

The PAM Concept of Operations is based on four PAM subsystems and interfaces to two external modules. The Application Document Input and Management (ADIM) subsystem will provide the interface to the PAM Authoring Program and will handle document conversion, fee processing, and application administration functions. The Examiner Action subsystem (EAS) will handle the examiner processing, and

the functions necessary to prepare an application for publication. The PALM+ subsystem will handle application docketing and status monitoring function. The P3 subsystem will handle photocomposition, printing, and other post-processing functions. PAM will be able to accept data from automated Authoring Program and provide electronic copies of allowed patents to the APS Examiner Search databases.

PAM will process electronic versions of information contained in the application file wrappers. Applications are submitted in, or converted to, text and image electronic format, and processed in that format during pre-examination and examination. Allowed patent applications will undergo final editing on-line and be formatted for printing through photocomposition software. The final product, a mixture of images and text, will be printed and added to the APS databases. The following figure depicts the relationships among these subsystems, interfaces, and databases.

PAM Concept of Operations



D. Configuration

The target configuration was developed for the purpose of estimating the costs of the PAM system. The current configuration design includes using existing USPTO personal computers as PAM workstations, possibly supplemented with an auxiliary keyboard with special PAM function keys; the USPTO telecommunications network now being deployed; and existing mainframe computers and peripherals for centralized databases and processing.

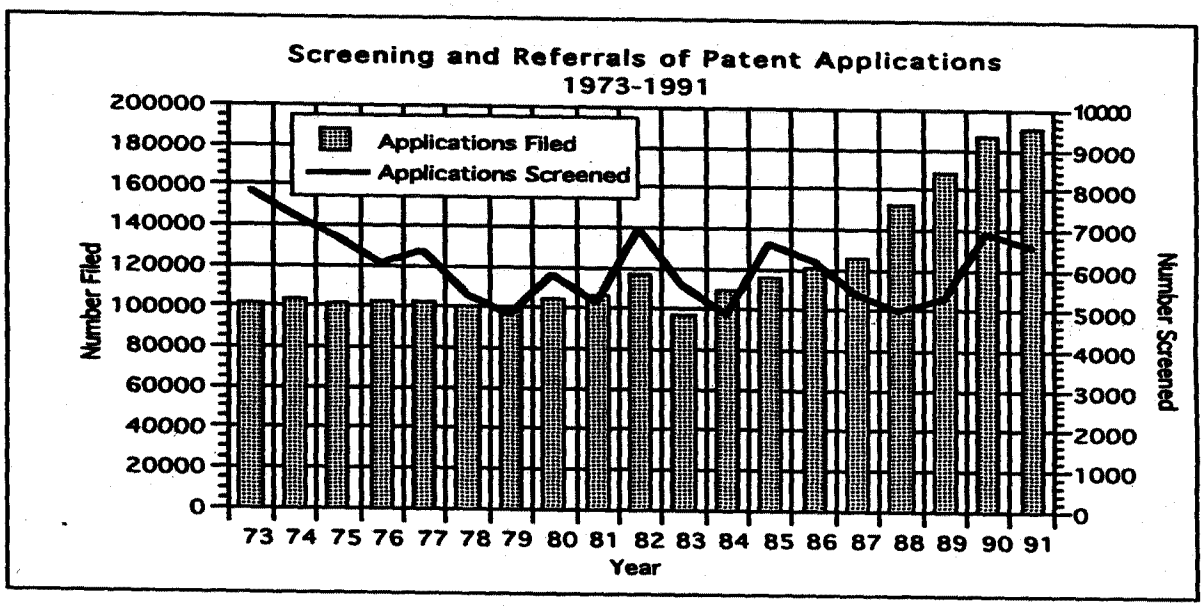
APPENDIX B
THE UNITED STATES SECRECY ORDER PROGRAM STATISTICS AND TRENDS

In response to a request by the Advisory Commission, the U.S. Patent and Trademark Office conducted a detailed inventory of currently pending patent applications subject to secrecy orders, as well as historical trends in the imposition of secrecy orders. The applications were placed into three different categories of ownership: Government–owned, those with a partial or no Government interest (e.g., those which will issue to and be titled in the name of a private U.S. entity), and privately-owned by a non-U.S. entity. The purpose of the inventory was to study trends in the imposition of secrecy orders, to identify which types of applications have been subjected to secrecy orders most frequently, and to identify other related information.

The most significant findings from the study were:

- the number of secrecy orders applied to applications owned partially or entirely by private entities rose sharply, and
- the Department of Defense issued far more recommendations for secrecy orders than all other reviewing agencies combined.

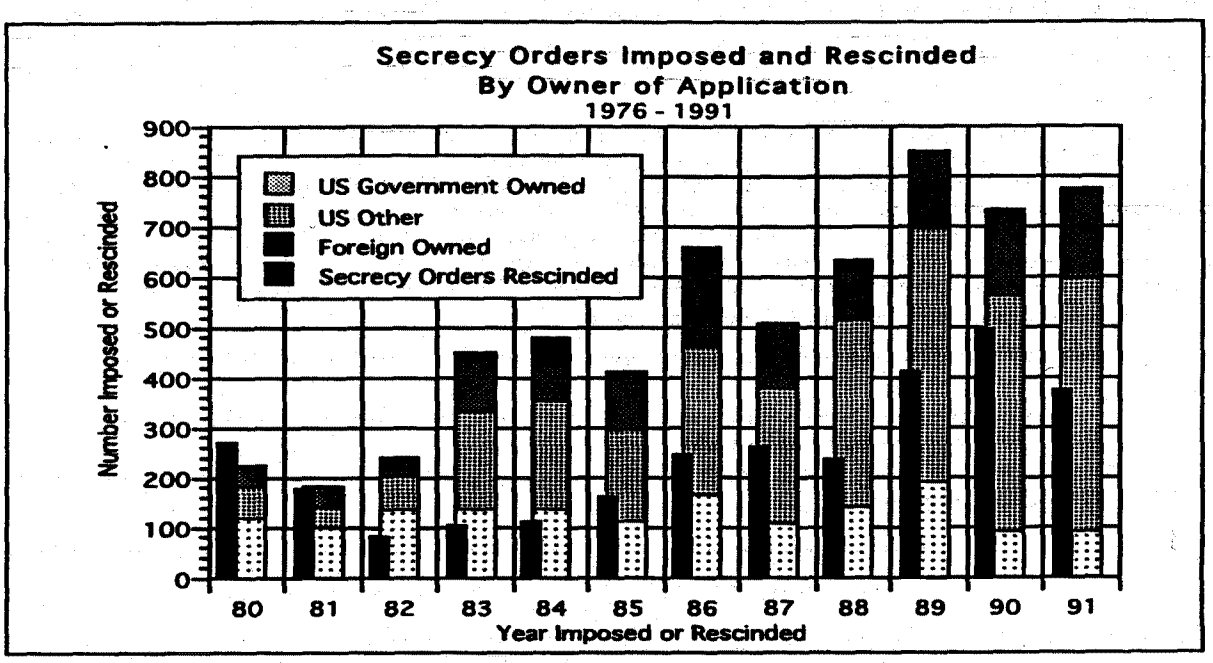
These findings were relied upon by the Commission in formulating its recommendations as to reform of the secrecy order program.



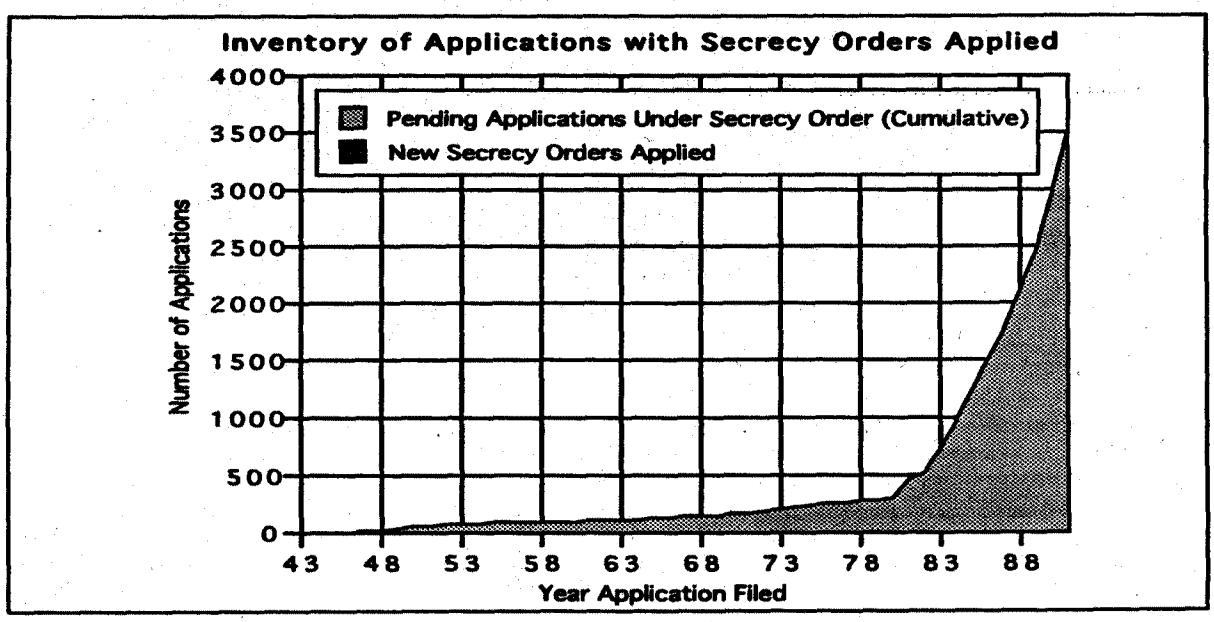
It is important to note that the overall volume of patent applications filed in the United States has surged in recent years. Even so, approximately the same proportion of applications continue to be screened and referred to agencies for purposes of review for secrecy order.

The most striking result of the survey is the significant increase in the number of secrecy orders imposed on applications other than those owned by the Federal Government. While the number of orders rescinded has risen at roughly the same rate, the overall inventory of pending patent applications under secrecy orders has grown significantly in recent years. Furthermore, the applications contributing to this growing inventory

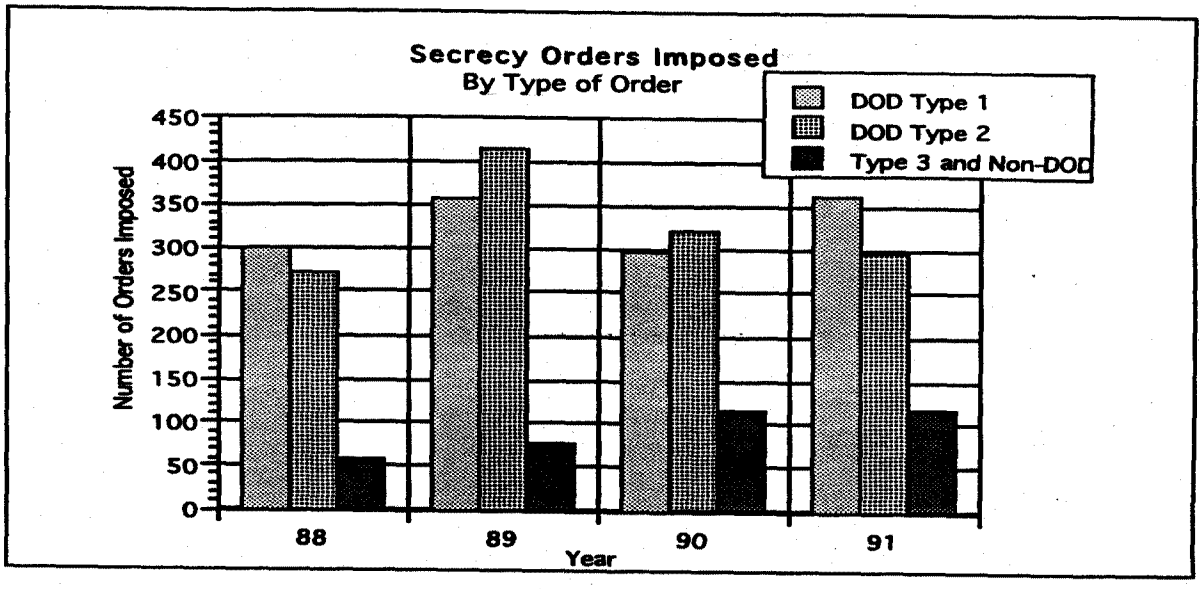
are predominantly those in which the Federal Government holds a less than full ownership interest.



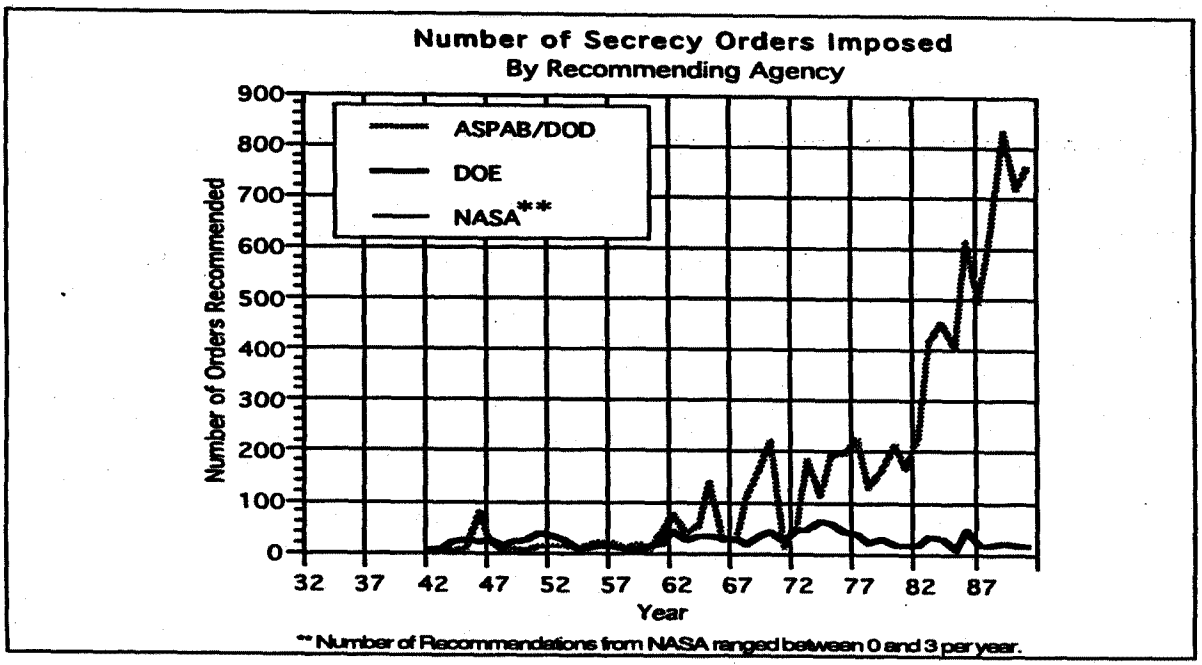
The following graph illustrates the significant increase in the number of pending patent applications currently under secrecy order.



From two different perspectives, it can be seen that orders recommended by the Department of Defense (DOD) far outnumber orders issued by other reviewing agencies. For example, when assessed by the type of secrecy order, one can see that the DOD initiated orders far outnumber non-DOD orders.



Similarly, when analyzed simply by the total volume of recommendations for secrecy orders, the DOD far outpaces other agencies in the volume of orders which stem from their recommendations. Thus, the sharp rise in volume of orders being applied is largely attributable to the actions of the Department of Defense reviewers.

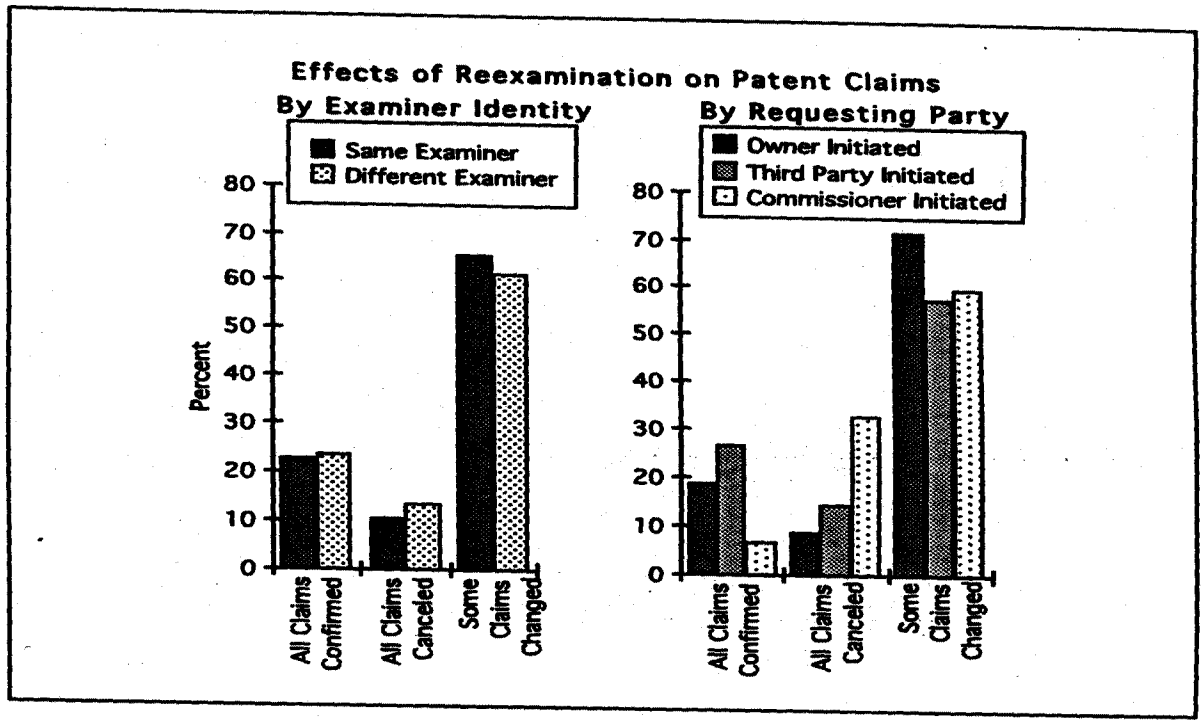


APPENDIX C
USPTO REEXAMINATION STATISTICS

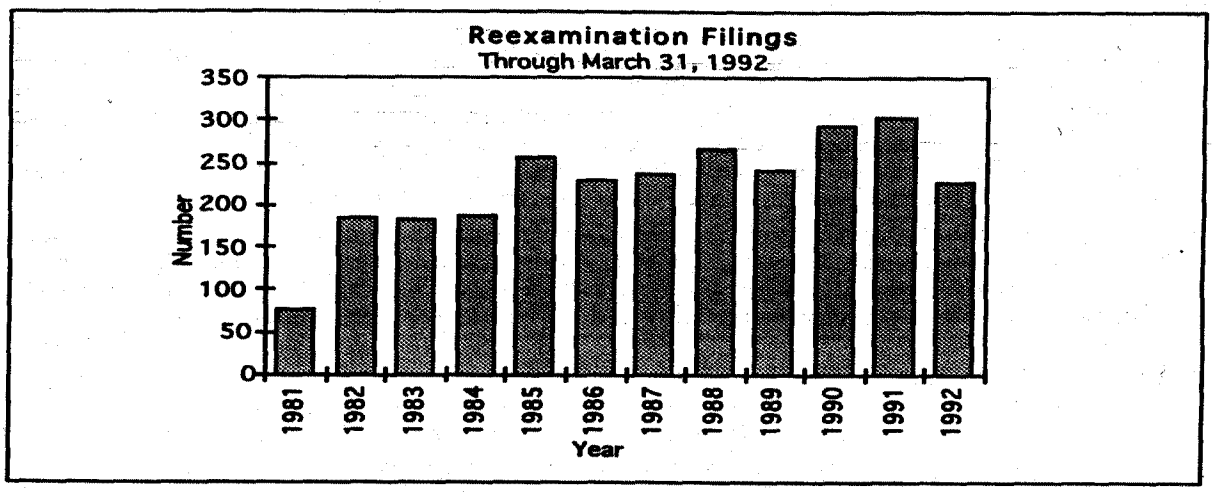
The USPTO has maintained detailed statistics on the trends associated with reexamination orders. These statistics reveal several interesting findings.

First, the proportion of patents which proceed through reexamination and issue unchanged is small. Although the substantive significance of this observation is limited, given the difficulty of ascertaining the degree or nature of change in each patent which is reexamined, it is significant that over 75% of all reexamined patents incur some change to the claims, and nearly 13% have all claims canceled.

Second, the effects of reexamination remain relatively constant, irrespective of the party requesting the reexamination and the examiner conducting the reexamination. Thus, despite general perceptions, there is no statistical significance which can be derived from the identity of the party requesting the reexamination, or due to the relationship between the original and reexamination examiner.

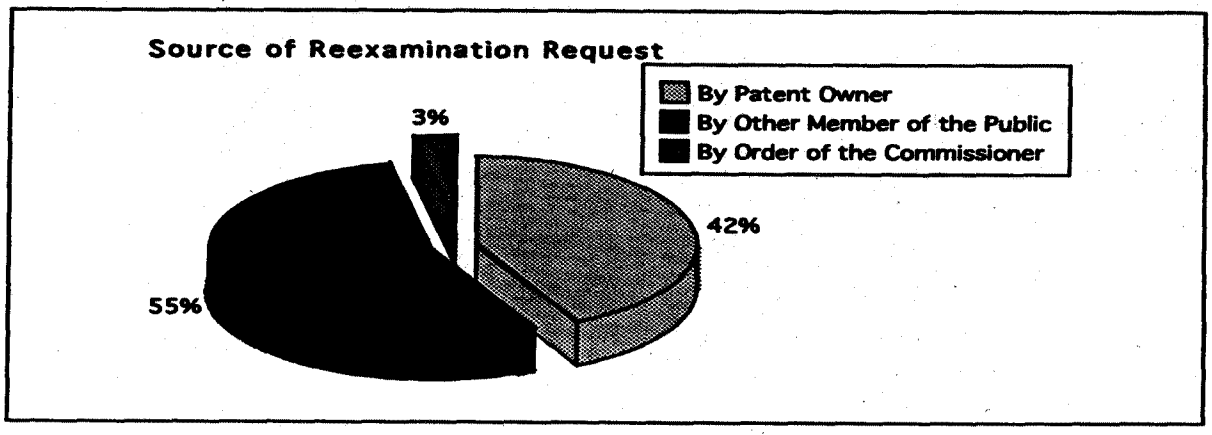


Since the institution of reexamination, there has been a gradual increase in the use of the procedure. This trend is consistent with the trends in patent application filings, which increased more dramatically

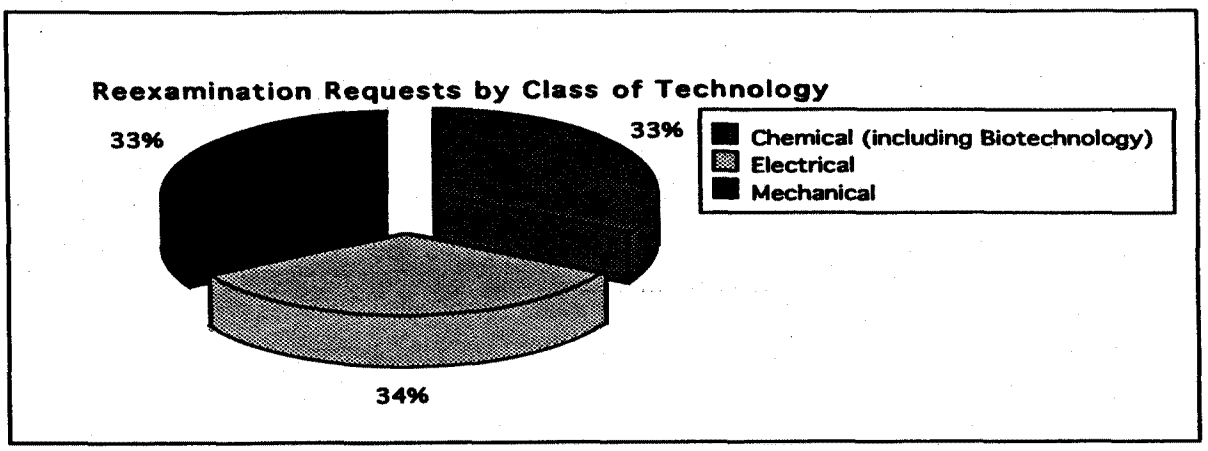


during the period of 1985-1991. The next figure illustrates this trend.

Measured in terms of all requests for reexamination filed, patent owners requested reexamination only slightly more frequently than did third parties (e.g., 13%).



As to the class of technology that the patent pertains, there is virtually no discrepancy in the proportions of reexamination requests filed.



Reexamination requests, on the whole, are very likely to result in a finding of a substantial new question of patentability, and initiation of a reexamination proceeding. Over 85% of all requests for reexamination are granted. Where requests are not granted, the identity of the party requesting the reexamination does not appear to have any significance (e.g., 8% denied where patent owner requests, while 6% denied where third party requests reexamination). An interesting figure is that nearly 75% of the denials of the request for reexamination were made by the original examiner (e.g., the examiner who conducted the original prosecution), and only 25% of the denials occurred where a different examiner was considering the request for the reexamination.

