

Electronic Data Collection at the U.S. Bureau of Economic Analysis

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Measuring the Nation's Economy.



Outline

- Background
- Automated Survey Transmission and Retrieval (ASTAR) System
- eFile: BEA's Second Generation of Electronic Filing
- Future Plans
- Questions

Background

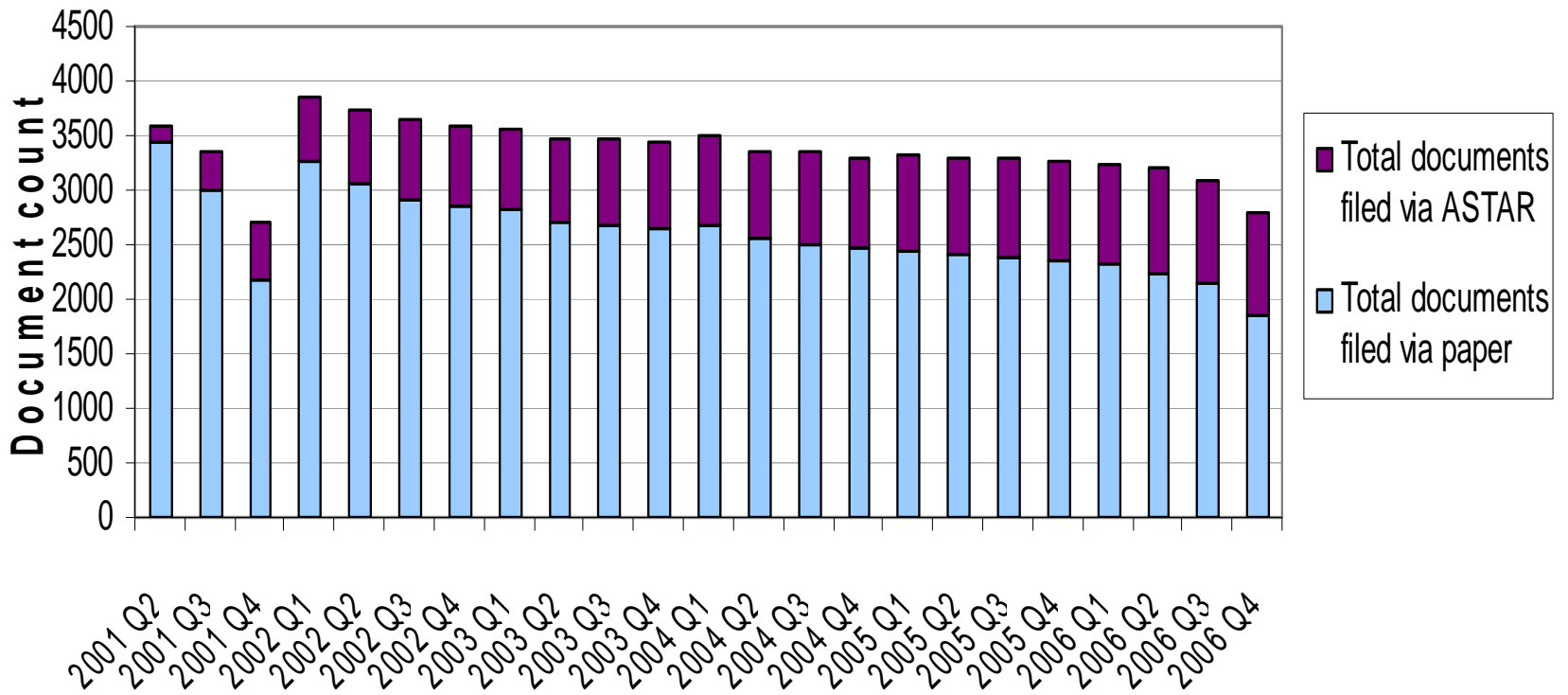
- U.S. Bureau of Economic Analysis
 - Produces national and international economic accounts
 - Most source data from outside sources (Census, Bureau of Labor Statistics)
 - Collects primary source data in two areas:
 - Direct investment
 - Trade in Services
 - 16 surveys
 - Mandatory
 - Confidential

Automated Survey Transmission and Retrieval System (ASTAR)

- Developmental efforts began in late 1990s
- Initial implementation in 2000 (2nd quarter)
- Gradually expanded to cover almost all surveys

ASTAR Usage

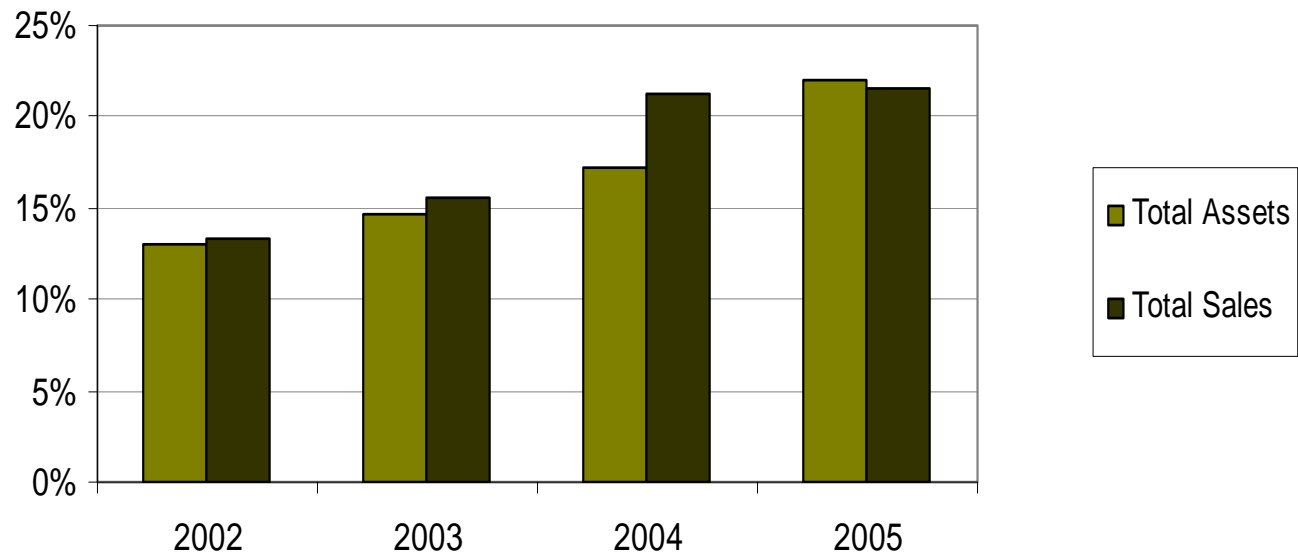
Chart 1: Total documents filed via ASTAR and paper for Form BE-605



ASTAR Usage - continued

- ASTAR users account for an ever increasing proportion of key metrics

Chart 2: Documents Filed via ASTAR as a Percentage of Total Assets and Total Sales*



*Data obtained from the benchmark and annual surveys of foreign direct investment in the United States, BE-12/15.

System Description of ASTAR

- JAVA applet runs in the respondent's browser
- Respondents can work on-line or off-line
- Data are encrypted in transit
- Assigned unique passwords are used to retrieve/decrypt/encrypt data
- Generates printable forms in PDF format

System Description of ASTAR - continued

- Encrypted data are stored on BEA's web server
 - SQL server accesses encrypted data, and decrypts the data
 - Decrypted data are loaded into internal database
 - Automated e-mail notification is generated
- ASTAR system includes import and export features (CSV file format)

ASTAR Usage - continued

- Import feature tends to be most widely used for the quarterly survey of U.S. direct investment abroad, Form BE-577

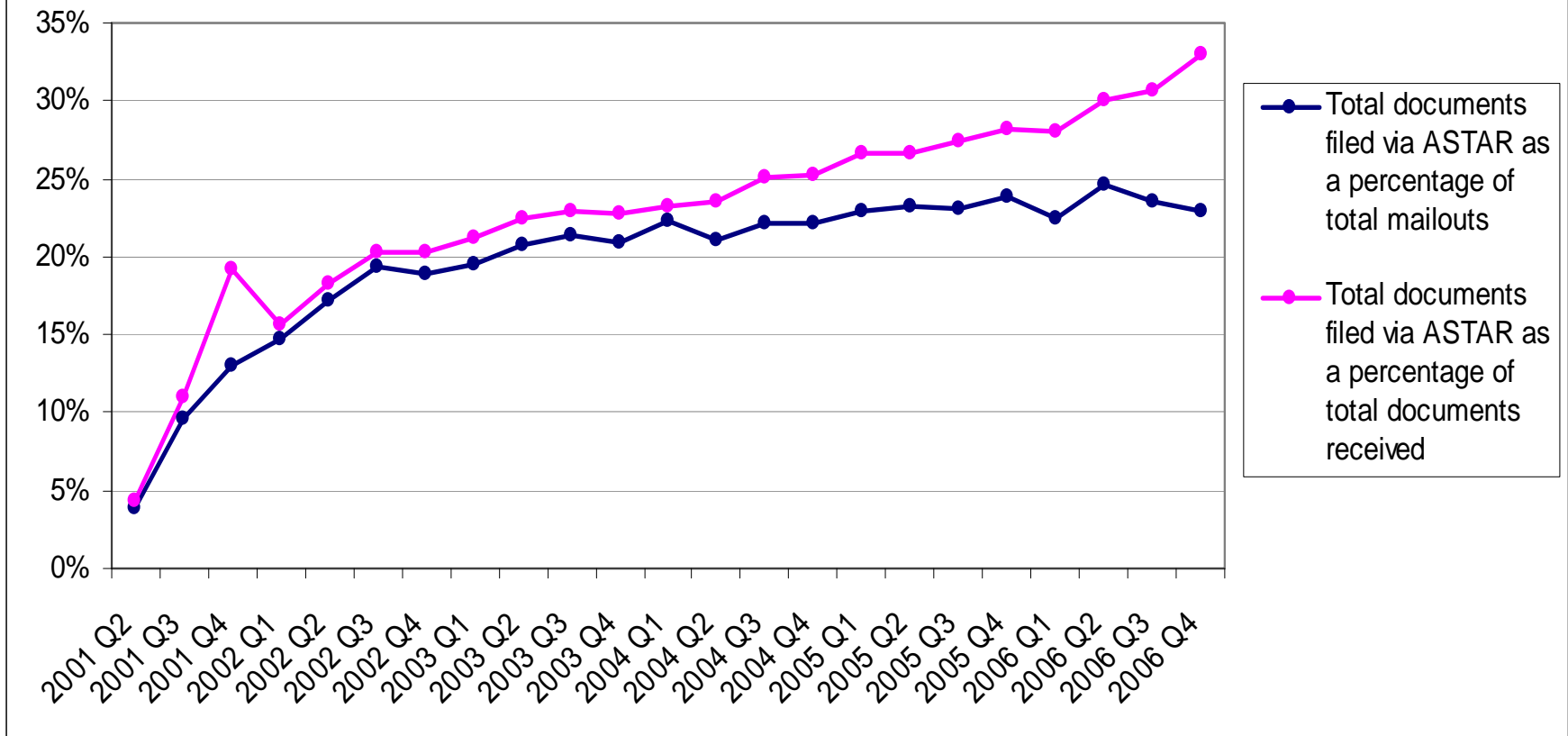
Table 1: Minutes Per Document for Form-577 ASTAR Users

	Average	Minimum	Maximum	Total Documents
2006 Q1	6.27	0.05	42.00	4973
2006 Q2	6.49	0.12	205.00	5013
2006 Q3	6.19	0.01	50.50	5609
2006 Q4	7.87	0.01	181.00	5528

Reflects only time spent online

ASTAR Success

Chart 3: Method of filing used by respondents for Form BE-605



ASTAR Successes - continued

- Improved timeliness
- Reduces BEA's costs
- Reduces timeframe for accessing reported data
- Eliminates keypunch errors
- Increases data integrity
 - Data pass through a series of checks prior to submission

ASTAR Challenges

- High maintenance costs
 - Must be supported by outside contractor
- Significant maintenance effort
 - Changes in technology
 - Changes in forms
- Burden of password maintenance
 - Unique period-specific password
- Limited flexibility in applying checks

eFILE

BEA'S 2nd GENERATION OF ELECTRONIC FILING

- BEA began researching and developing electronic filing alternatives in 2005
- Adobe E-forms were selected: eFile
- eFile prototype went into production in 2005 for Form BE-10, Benchmark Survey of U.S. Direct Investment Abroad

eFILE - continued

- Initially supported by outside contractor
- BEA subsequently began constructing PDF markup, encryption, and hosting of data collection in-house
- Currently used for 9 surveys
- Over the next 18 - 24 months, eFile will be extended to all BEA surveys

System Description of eFile

- Compatible with any computer that has Adobe Acrobat or the free Adobe Reader
- Users can change and update passwords at eFile password “portal” site
 - The password portal meets the E-authentication requirements
 - Passwords are never transmitted via email

System Description of eFile - continued

- Password “portal” site
 - Users complete an online form and submit a password
 - Portal verifies and validates password to UserID
 - E-mail confirmation is sent to respondent
 - Respondent confirms password by following link given in email
- Respondents save and submit data through BEA website
- Data transmitted via Secure Sockets Layer (SSL) and encrypted on BEA web server

User Acceptance of eFile

- 3 surveys converted to eFile in late 2006
- 6 additional surveys recently converted to eFile
- Encouraging usage rates
 - 30 percent of all BE-45 respondents
 - 26 percent of all BE-120 respondents

Benefits and Features of eFile

- Lower maintenance cost
- Improved password administration
 - Respondents manage their own passwords
 - Reduces BEA and respondent burden
 - Meets E-authentication requirements

Benefits and Features of eFile - continued

- More flexibility in validity and form-specific logic checks
- Data security
- Rapid confirmation of submissions

Future Plans

- Over the next 18 to 24 months, BEA will phase out ASTAR and convert to eFile for all surveys
- Develop an XML-based import and export feature
- Continue to improve and enhance the system

Contact Information

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