



**OKLAHOMA
TAX COMMISSION**



FTA PRESENTATION

THE OKLAHOMA EXPERIENCE

PDS

(PDF-BASED DATA-ENTRY SYSTEM)

A UNIQUE APPROACH TO FORMS DATA CAPTURE

AUG 11, 2008 – Chicago, USA

PRESENTED BY:

GINGER HULSEY
(Imaging Manager, OTC)

CARLOS GONZALEZ
(CTO, Dataintro Software)



**OKLAHOMA
TAX COMMISSION**

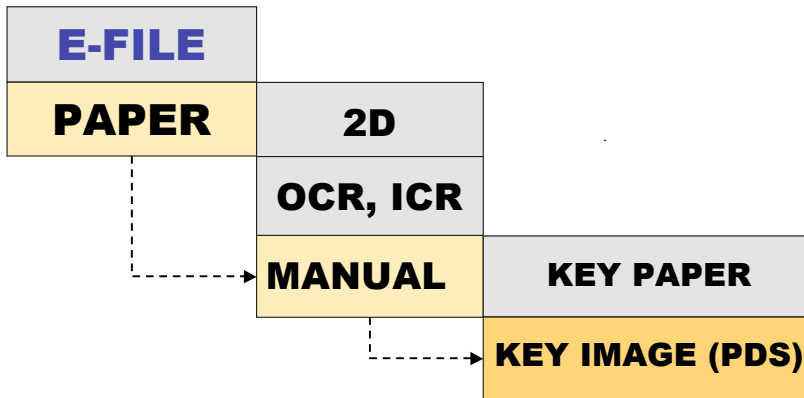


PRESENTATION AGENDA

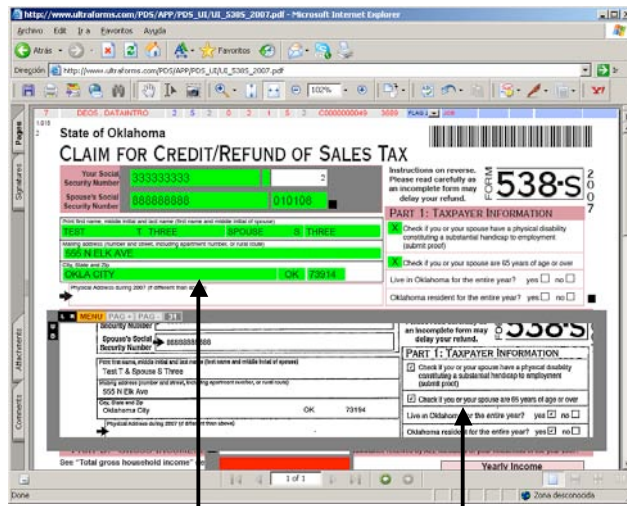
•INTRODUCTION	5'
•GENERAL PDS DESCRIPTION	20'
•THE OKLAHOMA EXPERIENCE	20'
•QUESTIONS	15'

INTRODUCTION:

SEVERAL WAYS TO PROCES INFORMATION



PDF-BASED USER INTERFACE



PDF FILLABLE FORM

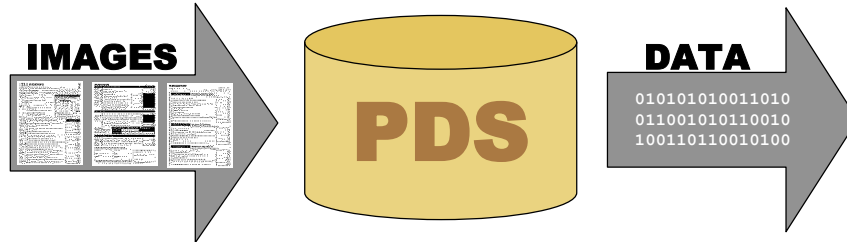
SCANNED PAPER TAX RETURN

ADVANTAGES OF A PDF BASED USER INTERFACE

- PDF works as a data tunnel. Images, code and data go through it without the need to reload the document, speeding up the system and saving bandwidth.
- The main UI loads once without the need to reload again. Only the dynamic elements reload.
- It works with **Acrobat Reader & IE**
- It uses a single monitor (no need for double monitors)
- It allows complex validations and/or calculations to be performed.
- It allows connections with external databases and pre-population of data when needed.
- The data entry interface shares the same graphical aspect as the hand written return.
- It allows zooming and/or moving the scanned image

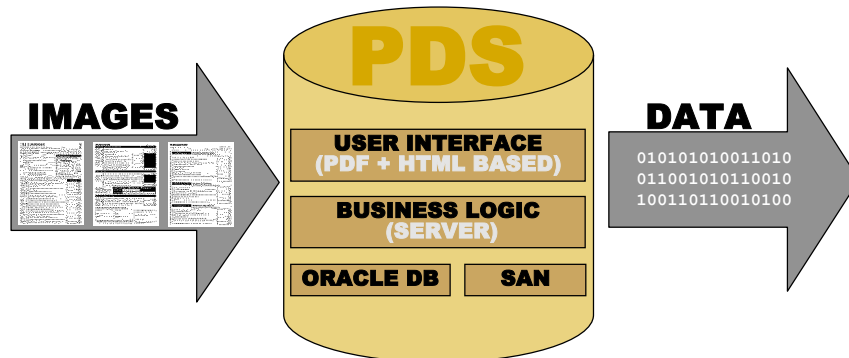
WHAT IS PDS: BASIC

PDS IS A CLIENT-SERVER APPLICATION THAT SERVES TO MANAGE **DATA CAPTURE** OPERATIONS FROM PAPER TAX RETURNS

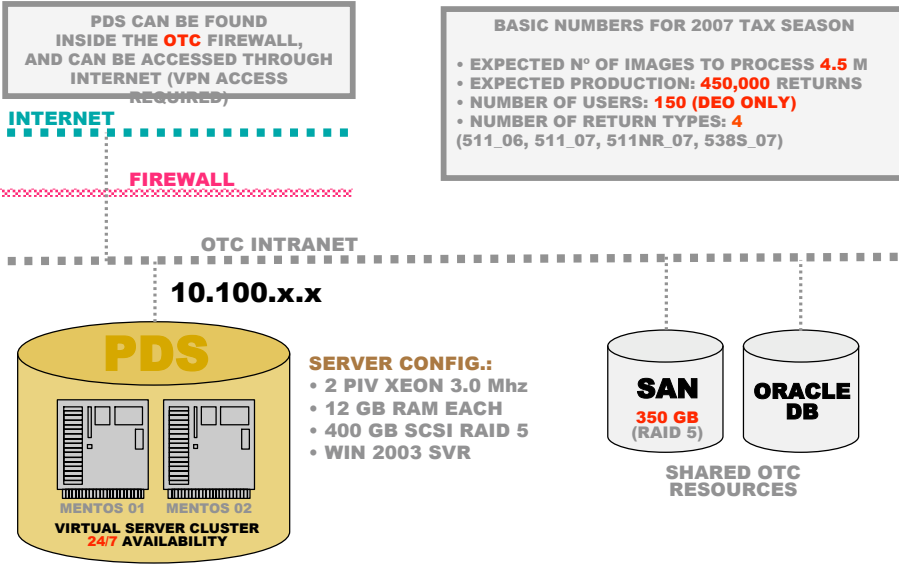


WHERE IS THE LOGIC IN PDS

PDS IS A 3 LAYER WEB APP. IN WHICH THE FRONT-END, (THE MAIN USER INTERFACE) HAS BEEN DEVELOPED USING THE **PDF FORMAT**.

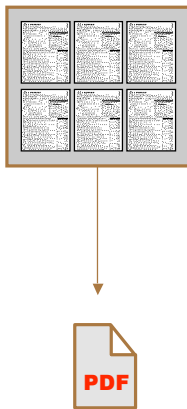


PDS SYSTEM ARCHITECTURE

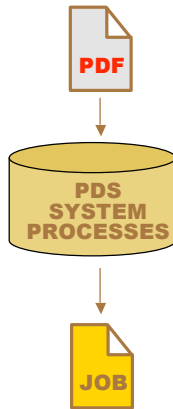


PDS TASK MAP

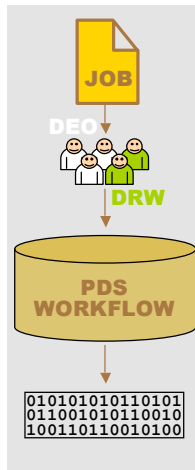
CONVERT
(4,600,000)



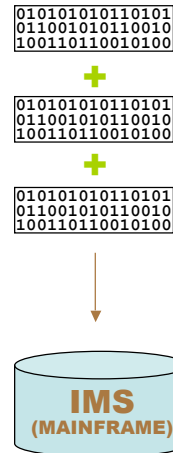
CREATE
(450,000)



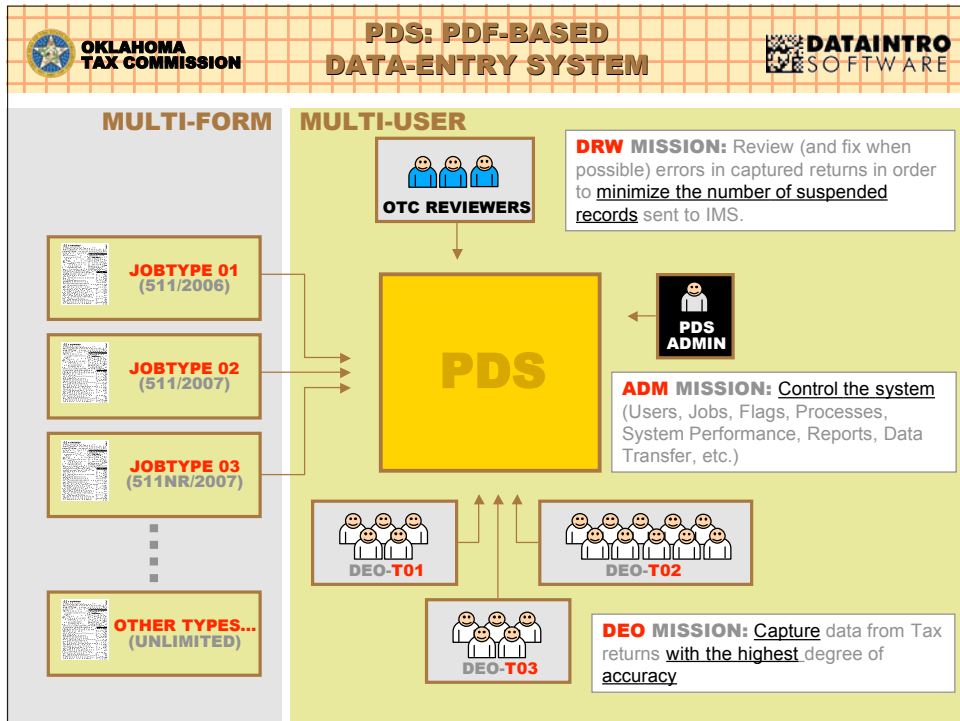
CAPTURE



EXPORT



=UNATTENDED



PDS: PDF-BASED DATA-ENTRY SYSTEM

PDS FEATURES (Partial List)

- **Multi-Form**
- **Multi-User (Operator, OTC Reviewer, Sys Admin)**
- **Dynamic User/Job Assignment (Workload Balance)**
- **Real-time Production Tracking (Reporting)**

(keystroke count, avg. returns processed, avg. time per return, avg. production per group, individual production, flagged returns control, status control, objective control, batch control, etc)

- **Page Management (Search image, Move image)**
- **Record Flagging & Routing**
- **Pending Jobs Control (hanged & overnight)**
- **Real-time Validations Against External DB**
- **Double Entry Step**
- **Math Validations**
- **Completion Color Scheme**
- **Etc.**



A BIT OF HISTORY:

2003-2005

OTC outsourced its imaging & data capture operation obtaining a mixed bag of results

JUN 2006

OTC decides to invest in a new system where:

- OTC would take care of imaging (acquires IBML scanners)
- OTC would manage their own data capture system (PDS)
- OTC will own the system once developed
- Developer will train OTC personnel for maintenance



A BIT OF PRESENT:

JAN 2007

- PDS Ready To Go

SEP 2007

- PDS enters production in September 07 (30,000 returns)

JAN 2008

- PDS full production & handles 500,000 returns (Individual Tax - 2007)

JAN 2009

- PDS enters PHASE II
- Individual + Corporate - 2008
- System Enhancements

QUICK FACTS:

OK POPULATION: 3.6 M

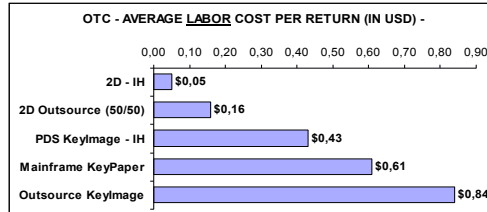
Total Tax Returns Received (2007) : 1.6 M (Only Individual Income Tax)	
E-FILE (930K – 60% Total Received)	PAPER RETURNS (670K – 40% Total Received)

PAPER RETURNS (670K – 40% Total Received)			
2D BARCODE 400K (60 % OF PAPER)		NON 2D 270K (40% OF PAPER)	
2D READ SUCCESS (51%) 205K (30% PAPER)	2D FAIL (49%) 195K (30% PAPER)	KEY FROM IMAGE 270K (40% PAPER)	
PROCESS: 2D READ ENGINE 205K (30% PAPER)		PROCESS: PDS (KEY FROM IMAGE) 465K (70% PAPER)	

DATA CAPTURE COSTS:

SAVINGS PER YEAR 450,000 RETURNS		2D IN HOUSE	2D OUTSOURCE CE	PDS KeyImage IN-HOUSE	MAINFRAME KeyPaper IN-HOUSE	KEY IMAGE OUTSOURCE
COST	\$22.500	\$72.000	\$193.500	\$274.500	\$378.000	
2D - IN HOUSE	\$22.500	-\$49.500	-\$171.000	-\$252.000	-\$355.500	
2D OUTSOURCE PDS KeyImage - IH	\$72.000	\$49.500	-\$121.500	-\$202.500	-\$306.000	
HOUSE	\$193.500	\$171.000	\$121.500	-\$81.000	-\$184.500	
Mainframe KeyPaper (I-H)	\$274.500	\$252.000	\$202.500	\$81.000	-\$103.500	
KEY IMAGE OUTSOURCE	\$378.000	\$355.500	\$306.000	\$184.500	\$103.500	

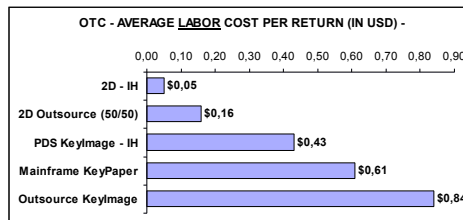
NUMBER OF RETURNS:	450.000
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DATA CAPTURE COSTS:

SAVINGS PER YEAR 150,000 RETURNS	COST	2D IN HOUSE	2D OUTSOURCE	PDS KeyImage IN-HOUSE	MAINFRAME KeyPaper IN-HOUSE	KEY IMAGE OUTSOURCE
		\$7.500	\$24.000	\$64.500	\$91.500	\$126.000
2D - IN HOUSE	\$7.500		-\$16.500	-\$57.000	-\$84.000	-\$118.500
2D OUTSOURCE PDS KeyImage - IN	\$24.000	\$16.500		-\$40.500	-\$67.500	-\$102.000
HOUSE	\$64.500	\$57.000	\$40.500		-\$27.000	-\$61.500
Mainframe KeyPaper (I-H)	\$91.500	\$84.000	\$67.500	\$27.000		-\$34.500
KEY IMAGE OUTSOURCE	\$126.000	\$118.500	\$102.000	\$61.500	\$34.500	

NUMBER OF RETURNS:	150.000
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CONCLUSIONS

- 2D BARCODES HAVE PROVED TO BE THE MOST COST EFFECTIVE WAY TO CAPTURE INFORMATION FROM PAPER TAX RETURNS
- WHEN 2D CAPTURE IS NOT AN OPTION, AN IN-HOUSE SYSTEM MAY BE A GOOD SOLUTION



END OF PRESENTATION

Questions?

THANK YOU FOR YOUR ATTENTION!



DATA CAPTURE OPERATOR



MISSION: Capture data from Tax returns
with the highest degree of accuracy

PDS DATA CAPTURE OPERATOR FEATURES

- Intelligent **Image Loading Algorithm (ILA)**
- **Color scheme for field completion**
- Conditional double entry process
- Redundant group filling process
- Group oriented navigation
- Conditional Auto-Fill
- Individual image request
- Validations against previous years data
- Empty field indicators
- Completed fields count
- Intelligent Keystroke Count



OTC REVIEWER



MISSION: Review (and fix if possible) errors in captured returns in order to minimize the number of suspended records.

PDS OTC REVIEWER FEATURES

- Image Pre-Loading based on OP info
- Flag information available
- Full Image Set access
- ON HOLD capabilities (for later review)
- Dynamic job assignment
- Empty field indicators
- Data discrepancies information on request
- Color based error location



SYSTEM ADMINISTRATOR



MISSION: Manage the system (Users, Jobs, Flags, System Performance, Reports, Data Transfer, etc.)

PDS SYSTEM ADMINISTRATOR FEATURES

- System settings (Forms, Flags, Files)
- User management (Operators, Reviewers)
- PDS Documentation (Diagrams, Process desc., etc)
- System performance Reports
- Real-time production tracking
*(keystroke count, avg. returns processed, avg. time per return, avg. production per group, individual production, flagged returns control, status control, objective control, batch control, etc)