

2020 Accessing Higher Ground Automation for 508 Compliance

Pat Needles
Executive Director of Sales

www.Equidox.co

EquidoxSales@onixnet.com

800.664.9638



What is automation?

AI is made of various components



- **Artificial Intelligence** – A scheme of human-like learning by machines, particularly computer systems. This can include processes like computer vision and machine learning.
- **Computer Vision** – Automation of the tasks that humans do with vision. This includes acquiring, processing, and analyzing digital images.
- **Machine Learning** – The building of models (especially software models) that can analyze data, identify patterns, and make decisions based on learning from those data and patterns.

Automation can't work alone

Human interaction is still required



Humans still need to provide:

- Context
- Logical order
- Definitions

What CAN be automated?

With human verification, AI can save a lot of work



- Identify and tag
 - Text
 - Images (detection but not alt-text)
 - Existing headings
 - Existing live links
- Some tools can semi-automate
 - Lists
 - Tables

Context - Identifying Images

How humans and AI work together

- Many images can be correctly identified by AI
- Facial recognition technology is very sophisticated, but still lacks situational details
- AI results are still simplistic and lack context
- Identifying elements such as graphs, charts or diagrams is not yet possible
- Article: [Can Image Recognition by AI replace Alt Text?](#)



“Image may contain night and fire.”

Logical Order - Heading Structure

Humans must set navigation structure

- Machines can identify headings by font, size and/or weight of characters. But humans must still define the levels that correspond to those characteristics
- Machines can recognize a skipped or out of order level but can't determine how to correct it
- Article: [Equidox PDF Academy – How to tag headings in PDFs](#)

Heading Level 1

PDF SAMPLE DOCUMENT

Accessible PDF Conversion
EQUIDOX
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Heading Level 2

This is a sample paragraph to help illustrate the simplicity of using Equidox for PDF remediation. Using the sensitivity slider, you can set zones quickly and easily. Then you can set headers using the mouse or our shortcut keys by pressing "H" and the header level.

Heading Level 3

Equidox can also add alt text for images, capture links, detect list items, insert footnote links, and provides a table editor to accurately capture table elements. You can preview the page elements in HTML to ensure you've remediated all the elements.

List

- Monday
- Tuesday
- Wednesday
- Thursday
- Friday

Table

Name	Age	Height	Weight
Anna	23	5.5	140
Bruce	57	6.0	180
Lydia	12	5.3	110
Sidney	40	5.10	165
Mark	38	6.2	205



Logical Order - Reading Order

Still beyond capabilities of machines

- AI can set top-down, left-to-right order
- Human assistance is needed for documents with images overlapping or in between text
- AI cannot recognize documents with text in columns such as folded brochures. A human must set reading order.
- Article: [Equidox PDF Academy - How to set Reading Order in PDFs](#)

The Pittsburgh Press
VOL. 71, No. 291 TUESDAY, APRIL 12, 1955 WEATHER—Mild and sun.

—Baseball—**FINAL**
Latest Stocks
70 Pages—5 Cents

POLIO IS CONQUERED

Public Airing Urged on Transit Bill
County Legislators Advocate Hearings
From news bureau last evening, Page 20, an editorial, "Let's have a hearing," Page 2, Sec. 2.

Biggest Thrill Came 31 Months Ago
It's Anti-Climax for Dr. Salk
He Was Confident of Success After Blood Check in 1952
It was strictly an anti-climax for Dr. Jonas E. Salk to learn today that his polio vaccine had passed its crucial tests.
He experienced his big once-in-a-lifetime thrill exactly 31 months ago.
It came shortly after Labor Day, 1952, when blood samples taken from the first 100 children to be inoculated with his vaccine at the University of Pittsburgh School of Medicine, he saw the evidence he was looking for.
Cats injected in the tubes were growing normally despite the fact they had been infected with deadly polio virus. This meant only one thing:
The vaccine was working.
From that day on, Dr. Salk never wavered in his conviction that the vaccine could protect children under natural conditions as well as in the laboratory.
That's why today's official verdict "didn't come as an anti-climax—it was something that was to be expected."
How does he feel now that his vaccine is here?
"Well, there's little to say," Dr. Salk observes, "other than it would be nice to take a week end and relax."
Weekend holidays have been kept busy for Dr. Salk since he plunged into polio research here seven years ago.

Vaccine To By-Pass Wholesalers
Doctors, Hospitals, Druggists to Get It
The Salk polio vaccine will be rationed out to doctors, hospitals and druggists as fast as it can be produced.
To speed up the process and prevent possible piling up in warehouses when the vaccine is needed everywhere, wholesale drug firms will be bypassed in the first crucial months of distribution.
At least two of the drug manufacturers already making the vaccine are ready to accept commercial shipments—worth well over a \$2 per shot plus the doctor's fee, as soon as the Government licensing agency gives the go-ahead signal.
"I am sure some hospitals will accept some orders," Dr. William G. Workman, chief of the government bureau which licenses medical preparations, announced immediately that the vaccine will be released to the public as quickly as drug houses can cut through the necessary red tape.
The vaccine works. It is safe, effective and potent.
Dr. Francis declared:
"There can be no doubt now that children can be inoculated successfully against polio," Dr. Francis declared.
"The vaccine works. It is safe, effective and potent."
The impact of Dr. Francis' announcement was

Salk Shots 80 to 90% Effective
(Color pictures and stories, Pages 2, 18 and 19; facts of reports on polio vaccine tests, Page 5; an editorial, "The Victory Over Polio," Page 2, Sec. 2.)
By JOHN TUDAN, Pittsburgh Press Staff Writer
ANN ARBOR, Mich., April 12—Medical science has triumphed over polio, a dread disease that has scourged mankind for more than 100 years.
The dramatic victory, so sweeping it overwhelmed even the scientists who had gathered here, was scored by the vaccine developed by Dr. Jonas E. Salk at the University of Pittsburgh.
Dr. Thomas Francis Jr., of the University of Michigan, announced here that the vaccine prevents paralyzing polio in 80 to 90 per cent of the children who get it.
"There can be no doubt now that children can be inoculated successfully against polio," Dr. Francis declared.
"The vaccine works. It is safe, effective and potent."
Dr. William G. Workman, chief of the government bureau which licenses medical preparations, announced immediately that the vaccine will be released to the public as quickly as drug houses can cut through the necessary red tape.
The vaccine works. It is safe, effective and potent.
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Some Scientists Weep
The impact of Dr. Francis' announcement was

Automation currently in use

What is possible NOW

Automated Features	Adobe Acrobat	Equidox
Recognizes existing tags (text, headings, links, images and alt-text)	Yes	Yes
Can “auto-tag” documents	Yes	Yes
Can set top-down, left-to-right reading order	Yes	Yes
Recognizes links within text	Yes	Yes
Auto-detect table elements (rows, columns, table summary)	No	Yes
Auto-detect list elements, including nested list elements	No	Yes

Equidox Powerful AI Tools for Lists and Tables

Remediation time reduced by 90%

Smart List Detector

- Auto-tags lists and list items
- Auto-tags nested lists

Smart Table Detector

- Row and column sliders auto-define cells
- Auto-populates table summary

Equidox Smart List Detector



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Equidox Smart Table Detector

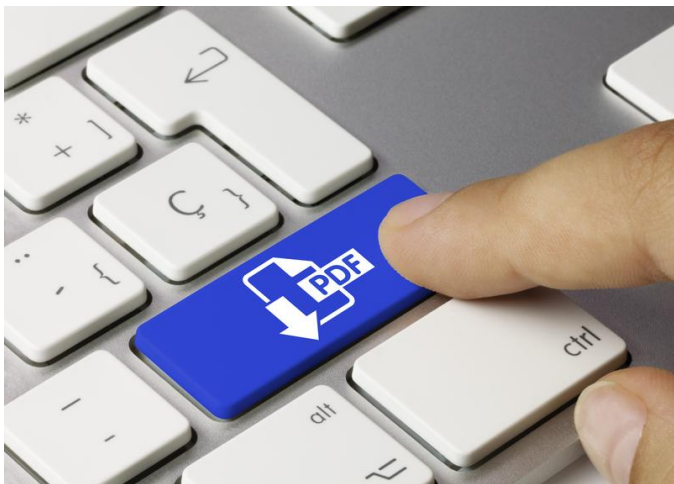


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Is complete automation of PDF remediation possible?

With human programming, yes it is...




- **Only for documents with similar elements**
- Human programming defines elements for machine learning engines
- AI creates a digital template
- AI applies defined tags to documents
- Documents are 100% compliant provided template is correct

Equidox Batch Processing - Static Templates

Automation for static documents

- Templated documents with identical formatting
 - Create tags using Equidox for an initial document
 - Save a template with zones/tags
 - Apply template to similar documents using exact zone/tag transfer
 - Results will be full tagged and compliant



Account Number: XXXX XX XXX XXXX
Customer Service: 1-800-XXXX-XXXX
Page 2 of 2

Post Date	Trans Date	Reference Number	Merchant Name or Description of Transaction	Dollar Amount
PAYMENTS AND OTHER CREDITS				
MM/DD	MM/DD	XXXX	PAYMENT -THANK YOU	-\$XXX.XX
PURCHASES				
MM/DD	MM/DD	XXXX	Merchant Name	\$XX.XX
MM/DD	MM/DD	XXXX	Merchant Name	\$XXX.XX
MM/DD	MM/DD	XXXX	Merchant Name	\$X.XX
MM/DD	MM/DD	XXXX	Merchant Name	\$XX.XX
FEES				
MM/DD	MM/DD	XXXX	Late Payment Fee	\$XX.XX
MM/DD	MM/DD	XXXX	Cash Advance Fee	\$XX.XX
MM/DD	MM/DD	XXXX	Balance Transfer Fee	\$XXX
INTEREST CHARGED				
MM/DD			Purchase Interest Charge	\$XX.XX
MM/DD			Cash Advance Interest Charge	\$XX.XX
MM/DD			Balance Transfer Interest Charge	\$XX.XX

Promotional APR= Limited-time APR on specified transactions
(v) = Variable Rate
(d) = Daily Balance Method (including new transactions)
(a)= Average Daily Balance Method (including new transactions)



Equidox Custom Batch Processing

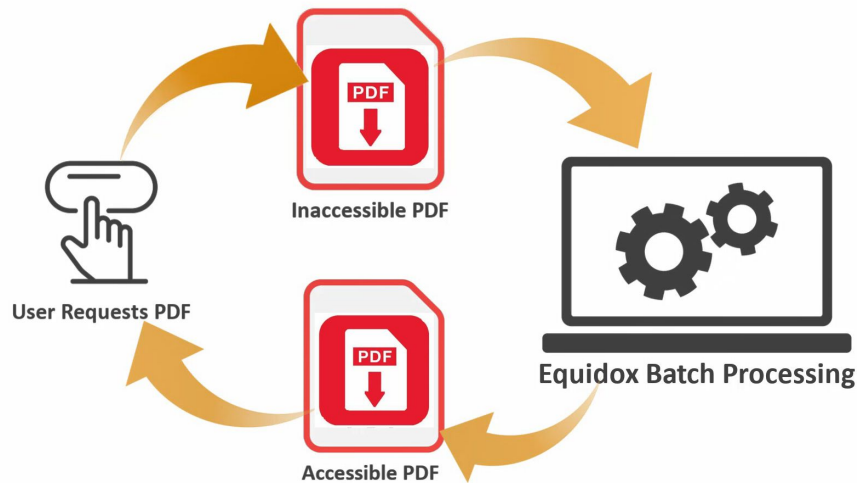
100% ADA Compliant PDFs

- Custom process tailored to each client
- Suitable for repetitive, recurring documents with static elements
- Integrated into PDF production workflow
- Employs existing security protocols
- Local or cloud server
- On-demand results

Equidox Custom Batch Processing - Integrated and On-Demand

Automation for multiple similar documents

- Machine learning creates template with defined tags/zones
 1. User requests PDF
 2. PDF is generated
 3. Equidox batch processing tags PDF
 4. 100% compliant PDF is delivered to user
- Integrated into PDF production workflow
- Instant and on demand for all users



Equidox Automated Batch Processing



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www.Equidox.co

EquidoxSales@onixnet.com