

*“I have been waiting twenty-five years for this technology to arrive! This is really going to drive down our operational costs by allowing us to use fewer people at the data entry level and ultimately at the verification level too.”*

*Mark Meyers, CEO*

# Advanced Document Classification and Data Extraction for Healthcare

Paper document processing solutions have been on the market for years but in many cases the complexity of document formats have limited the ability for software to capture and process the critical data. Axis now offers document processing solutions for all your document challenges.

In many instances, client documents come in complex semi-structured and unstructured document formats. These have traditionally been the hardest if not impossible to enable automated document classification and data extraction for a number of factors.

Traditional document extraction solutions have relied on templates or keyword searching for information capture. This doesn't work well for a large number of document format scenarios

**Semi-structured documents** – Much of the document many stay the same but many of the key data elements vary, for example, a table list or fields can randomly come and go on a page, templates just doesn't work that well. Explanation of Benefits, Claim forms like UB92, HCFA.

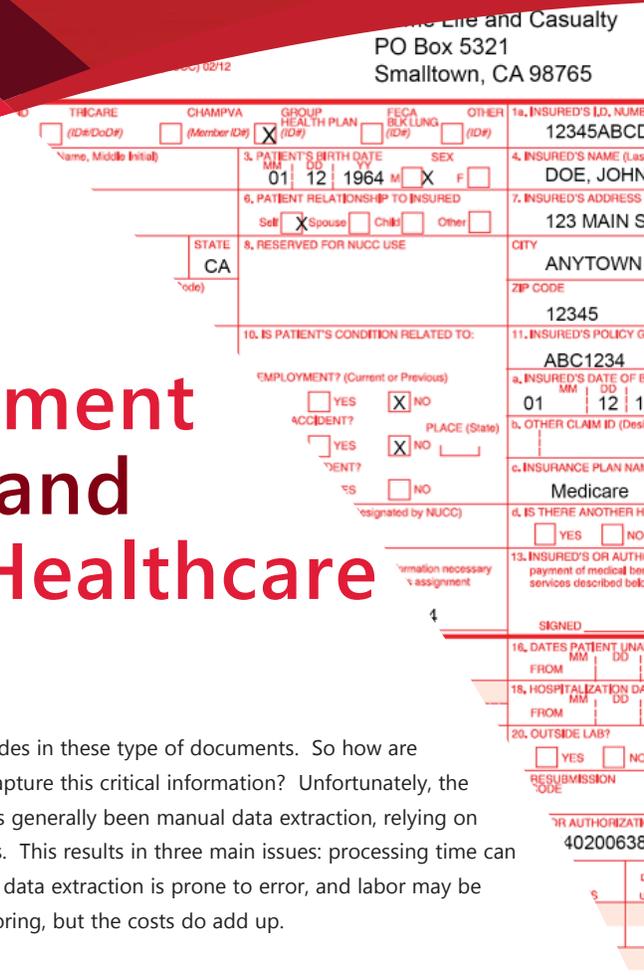
**Unstructured documents** – Most of the index information is buried within the depth of a paper, often within sentences within a paragraph. The data positioning continually changes, the only consistency is the language around the index. Legal contracts and correspondence are examples.

## CHALLENGE

80% of data resides in these type of documents. So how are clients able to capture this critical information? Unfortunately, the best solution has generally been manual data extraction, relying on data entry shops. This results in three main issues: processing time can be slow, manual data extraction is prone to error, and labor may be cheap by off-shoring, but the costs do add up.

## SOLUTION

Axis offers a robust, leading-edge software technology, Axis AI, using advanced document classification and data extraction capabilities utilizing sophisticated algorithms to read and understand the context of documents. It studies patterns and can compare documents to find information as you would train a human. Machine Learning is incorporated so it trains as it operates, the more documents it processes, the more it learns. Automated data extraction can process documents many times faster than a human. In one case, a client was taking months to extract data from a huge repository, with Axis they were able to do it in days.



The image shows a portion of a complex healthcare form, likely a Medicare claim form. It contains numerous fields for patient information, including name, birth date, sex, and address. There are also checkboxes for insurance types (TRICARE, CHAMPVA, GROUP HEALTH PLAN, FECA, OTHER) and patient relationships (Self, Spouse, Child, Other). The form is partially obscured by a large red graphic on the left side of the page.

## What Makes Axis AI The Right Choice?

With Axis AI, organizations have a superior alternative to manual keying or the costly and ineffective results of other data extraction solutions.

### BENEFITS

Computers don't forget, as the product runs it improves both classification and extraction quality. The results are predictable and consistent. The technology of never tires, never forgets and never quits.

By reducing the number subject matter experts doing data entry, you can use these trained resources on exception handling, not data entry. Invest time with your team in meaningful document processing workflow rather than monotonous key from error-prone image typing.

### EXPLANATION OF BENEFITS (EOB)

Complex forms and a countless number of formats due to documents originating from your clients. Organizations cannot control the type and number of varieties coming from their business associates. The format is complex including both structured form headers and random table and index positioning. In many cases, these documents can range over a single page, when sent as a batch of images there are no clear separation of pages, user interaction was generally required to separate pages and classify the documents.



### CLAIMS - UB92, CMS1500, HCFA

Although these are formatted as forms, the clients enter the data into these forms with little concern about doing it carefully.

Index values appear in somewhat standard positions but never consistently, this presents real challenges to template based extraction solutions.



Other examples include Legal Files, Employee and Customer Files, Insurance, Patient, and Medical Records, Benefits and Scientific Studies.

### THE BOTTOM LINE

Axis AI now offers solutions that are faster, cheaper and extend to a wider range of document processing challenges than ever before. No other vendor on the market today has the experience, technology and know-how to address the most complex document processing opportunities out there today.

### INDUSTRY EXPERIENCE

- HEALTHCARE
- LAND AND TITLE
- OIL AND GAS
- FINANCIALS AND BANKING
- INSURANCE

Since 2002, Axis has served as a trusted technology advisor to leading companies in the mortgage, title, healthcare and financial services industries. Fast, fluid and focused, our global team offers unmatched technical and business expertise at a reasonable cost. We combine the comprehensive skills and resources of a global consulting firm with a personal, solution-oriented approach.

**It's not just about technology –  
It's what technology can do for your business.**



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