

# HOW MANY MICROFILM IMAGES IN A **LEGACY COLLECTION?**

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Crowley's **Digitization Services bureau** often receives inquiries as to the cost of digitizing a microfilm collection. The most common first reply is, "It depends." While this can be frustrating when looking for a quick answer, it becomes quickly evident that each microfilm collection is unique and more information is needed to ensure any type of quote accuracy.

## **HARD QUESTIONS**

With an average tenure of fifteen years each in the preservation and digitization industries, the Crowley staff is well-positioned to work with collection holders to determine the variables that will affect the digitization project scope.

Questions about the collection will include:

- microfilm format (cine, comic, simplex, duplex)
- film size (16mm, 35mm)
- reduction ratios
- roll length (100', 215', 1,000', others)
- and a myriad of other technical factors

The answers will help to qualify and quantify the collection's number and types of microfilm images.

It's not uncommon for microfilm collection managers and purchasing officials to be unaware of the specifications required for accurate collection assessment. The primary responsibilities of these positions are to either manage the physical collection (inventory, storage, access) or to develop a request for quote (RFQ or RFP). Neither may have the information needed to supply the technical specifications required for an accurate digitization estimate.

## **(RELATIVELY) EASY ANSWERS**

The step-by-step process below has been utilized by Crowley to help clients better identify their microfilm collection with technical description, types and quantities as the first step towards making the decision to digitize.

### **STEP 1: FILM WIDTH**

Most microfilm widths will either be 16mm or 35mm when measured from left to right across the film with a millimeter ruler. With a standard ruler, the 16mm film measures approximately 0.63"; the 35mm measures approximately 1.38".



16MM



35MM

### **STEP 2: FILM THICKNESS/REEL LENGTH**

This step determines the number of linear feet on the reel, a critical step in estimating image counts. If this information is not immediately known, an inexpensive method to determine film thickness and the resulting reel length



is with a digital thickness gauge, also called a micrometer. These can be purchased **online** for under \$20.00\*.

Using the gauge or the information provided, determine if you have thin-base film (2.5 mil) or the thicker base film (5 mil) to determine reel length.

Thin base (2.5 mil/.0025) = 215' in length

Thick base (5 mil/.005) = 100' in length



**Note:** There are other microfilm thicknesses and reel lengths, but for the most part legacy collections contain 100' or 215' reels. Your Crowley representative can help answer additional reel length questions.

### STEP 3: FILM TYPE

Simplex microfilms (sometimes referred to as “one-up”) contain one row of images across the width of the microfilm. Duplex or Duo (“two-up”) microfilm contains two images side-by-side.



SIMPLEX MICROFILM



DUPLEX (OR DUO) MICROFILM

### STEP 4: PUTTING IT ALL TOGETHER FOR AN IMAGE COUNT

Assuming the image count per reel is not already known, we can marry the information from the above steps to accrue a good image count estimate.

**Example:** Steps to determine the number of images on a typical roll of 16mm microfilm.

1. Determine the film thickness (2.5 mil or 5 mil) to establish the reel length of a 100' or 215'
2. Assume for this example the reel is a 2.5-mil thick film, giving a film length of 215'
3. Next, assume the film type is simplex
4. Measure a one-foot length and count the number of images. In the below image, the film has 27 images within a one-foot length.



5. Assume approximately 3' of blank leader and 3' of blank trailer (blank film is used for threading the camera and later, the microfilm reader). In actuality, you should measure the leader as it may differ from roll to roll.
6. Determine the true reel length (215' reel minus 3' leader minus 3' trailer = 209' of film)
7. Multiply the 209' by 27 (the number of images estimated per foot on this reel)
8. There are roughly **5,643** images on the roll

Microfilm reduction ratio measures how many times the microfilm camera and lens reduced the original document at the point of creation to obtain the resulting micro-image on the microfilm. It's worth noting that over the 75-year span since microfilm creation came into commercial use, capture equipment has evolved. Better camera lenses and finer grain film, coupled with improved technology, have allowed much higher reduction ratios than the traditional 24x. Although the “standard” ratio to image count may be 24x to 2500 images per reel, it cannot always be assumed.

### SO, HOW MANY IMAGES IN A LEGACY COLLECTION?

By now it should be clear why “it depends” is the first answer to this question. If a vendor attempts to provide a quick quote without asking any of the questions needed to determine answers to the steps above, the buyer should beware. A reputable vendor will help to delve into the details of your collection before attempting to quote a price.

The Crowley Company offers complimentary scan samples, which can help to determine film type and image quantity as well as alert the collection holder to film and image quality issues not readily detected otherwise. Additionally, Crowley offers expert **microfilm collection assessment services** to help identify the details needed to formulate a comprehensive digitization program void of surprises.

As with **microfilm digitization**, there are similar steps to obtaining accurate estimates for microfiche and aperture card scanning. Each medium is considered a type of microform and has its unique challenges, all of which the Crowley Imaging professionals are familiar.

For more information, pricing or assistance with image count or collection assessment, please call (240) 215-0224 or visit [www.thecrowleycompany.com](http://www.thecrowleycompany.com)

\*Example only. The Crowley Company does not endorse this product.