

EndFaceData2 (2.2)

User Manual

Rev. 1

2011-10-27

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1. Overview

1.1 *Functions*

The main purpose of EndFaceData2 is to analyze the fiber end face images and to give a quantitative measure of any defects on the fiber end face semi-automatically.

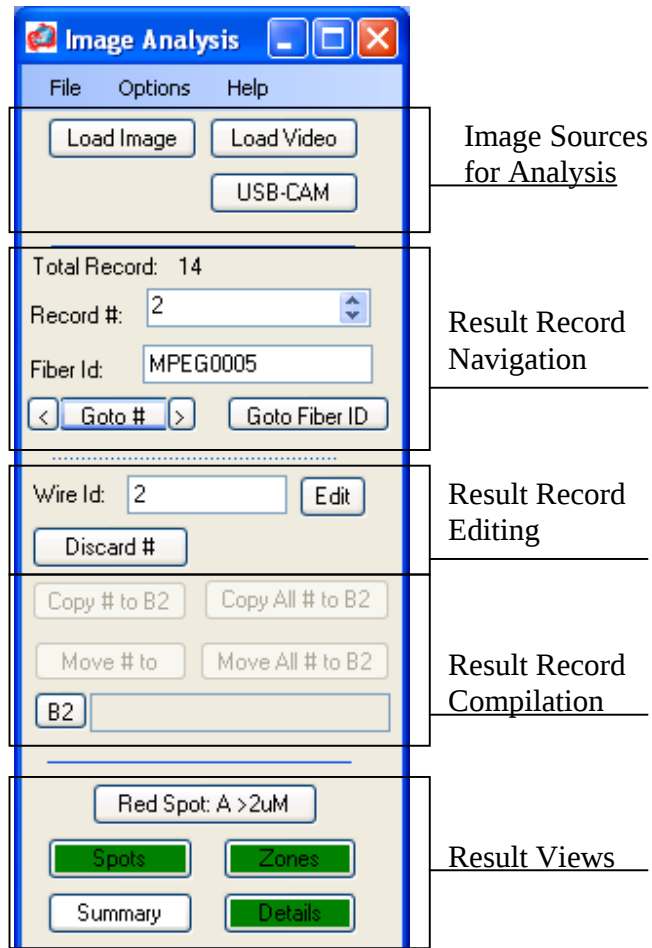
It also provides facility to allow easy compilation, filing, reporting, reviewing and distribution of the analysis results.

It stores all the analysis results in a collection called a batch. User must open a batch before doing any analysis.

Everything can be traceable by respective ids and date time stamp, like, fiber id, fiber image captured date time and analysis date time.

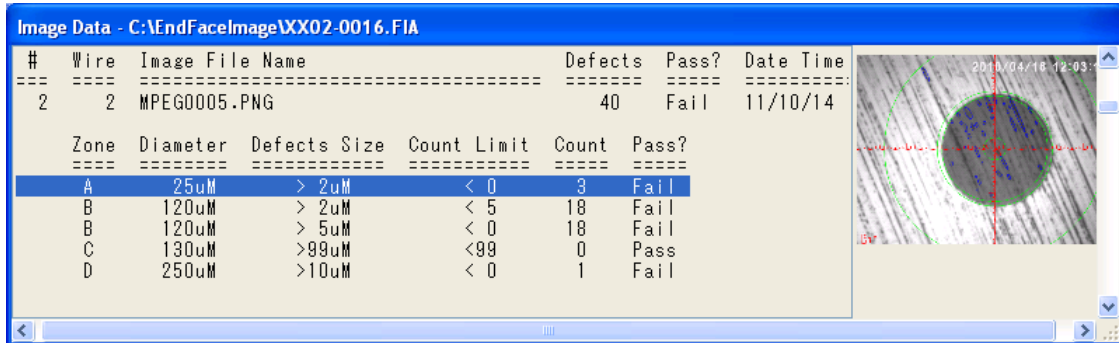
1.2 Main Screens at Work

1.2.1 Image Analysis Screen – the control panel

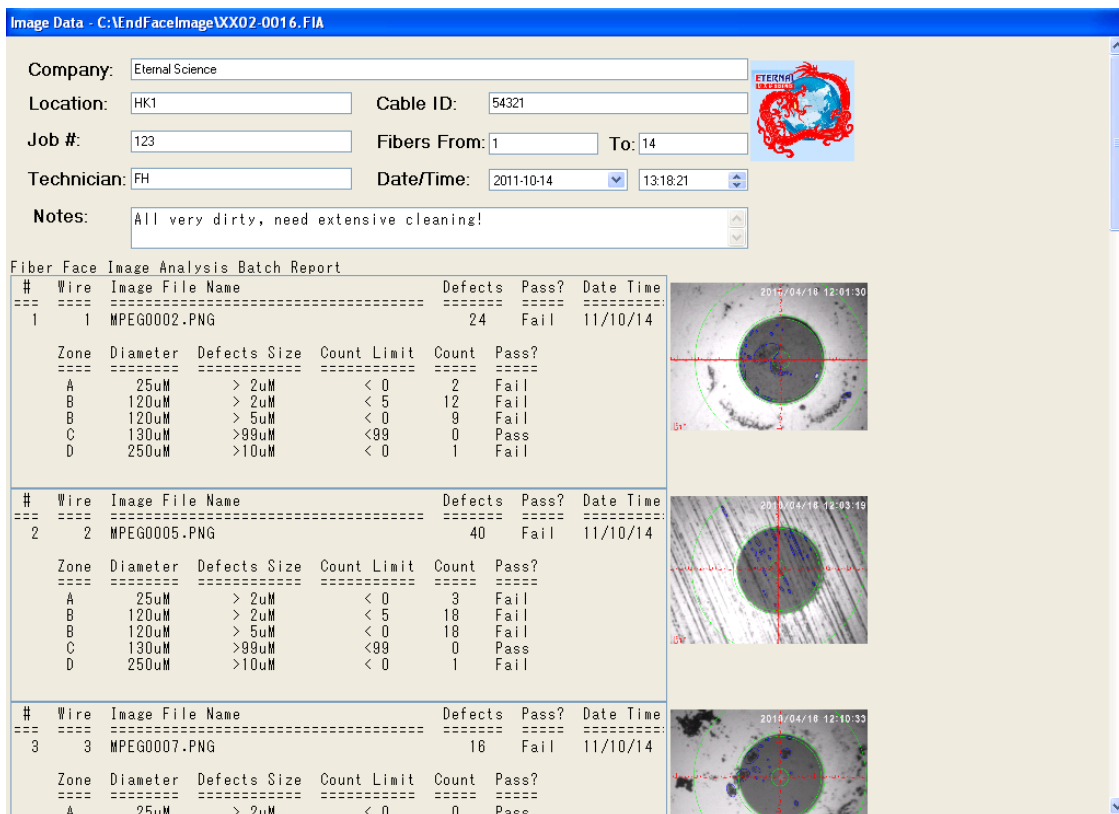


1.2.2 Image Data Screen – the analysis result data & thumb nails

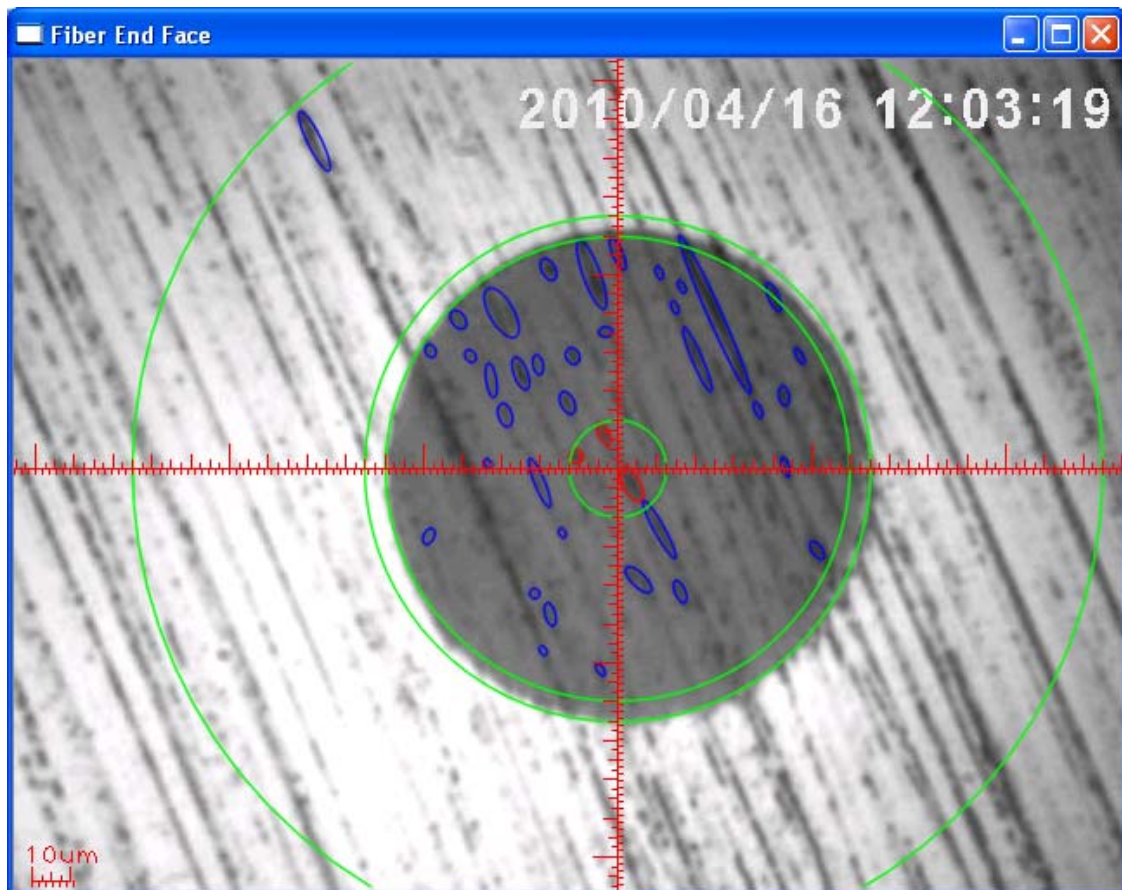
This screen defaults to show only one result record or the batch header at a time.



However, user can double click at its top to expand it fully to show multiple result records at a time.



1.2.3 Fiber End Face Screen – the analysis result image



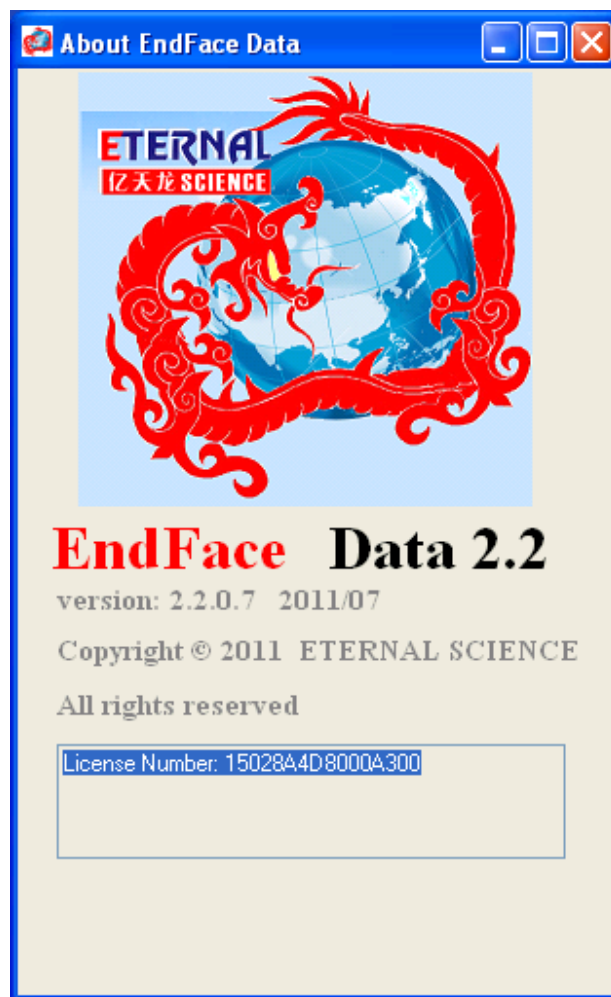
2. Fiber End face Analysis

2.1 System Startup – Note the operation mode

There are two working modes in the EndFaceData, the full function mode, and the Reader mode.

User must plug in the License Dongle first before starting the EndFaceData, in order to enjoy the full functions of the software.

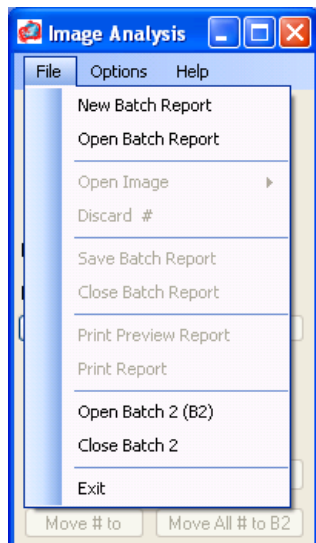
The following splash screen indicates that a valid License Dongle has been detected. After showing for three seconds, it will go on to show the main screens – the Image Analysis screen and the Image Data screen.



2.2 Opening a Batch

User must open a batch first, either new batch or an existing batch, before any fiber end face analysis will be allowed.

User can create a new batch, by clicking File – New Batch Report,
or open an existing batch, by clicking File – Open Batch Report.



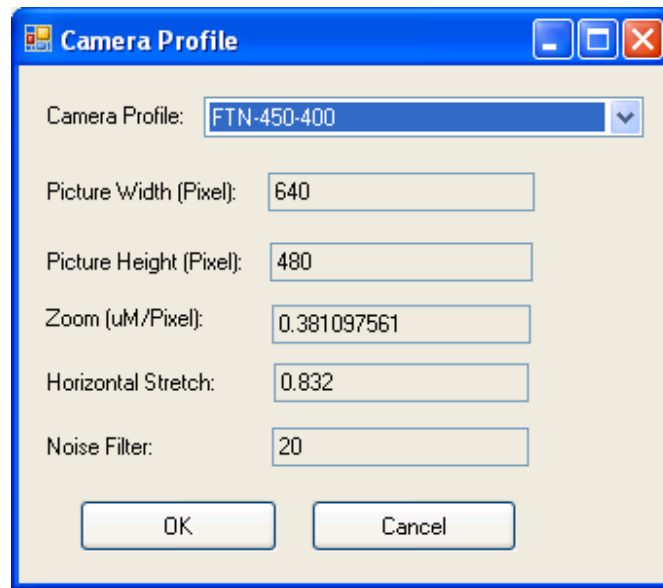
2.3 Scope Profiles

A Scope Profile (also called Camera Profile) defines the various attributes of the fiberscope that will capture / have captured the end face image for analysis.

Different models of fiberscope give different zoom size and various quality of images of fiber end faces.

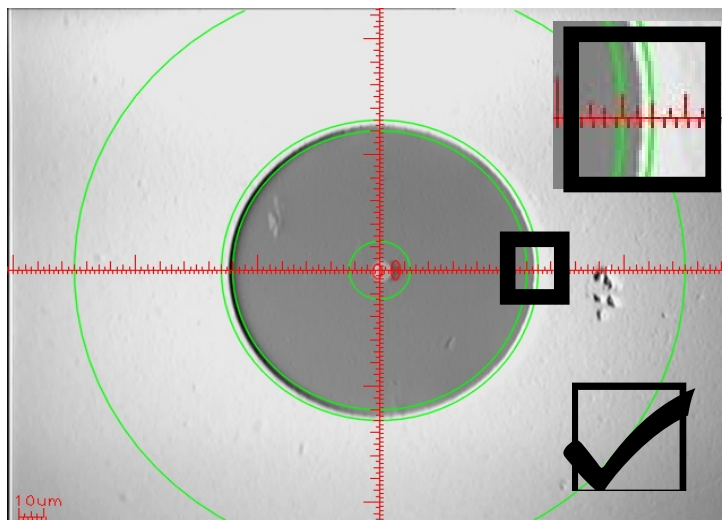
The EndFaceData2 can accept fiber end face images from a number of defined models of fiberscope. Please see the list of the supported models in the appendix, “A.2 Supported Fiber Scope Models”

Before starting an analysis, the matching Fiberscope Profile must be selected first.



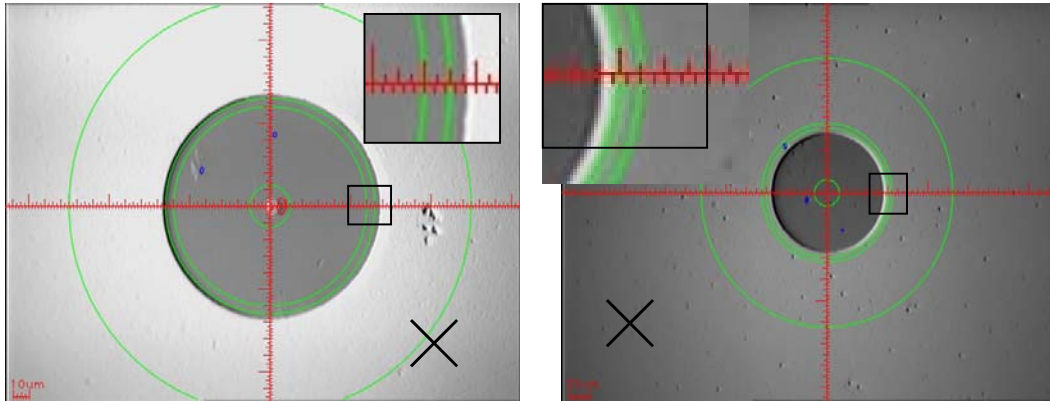
2.3.1 Correct Camera Profile Selection

A correct camera profile should give the result image as below, with the fiber cladding perimeter lies between the Zone B and Zone C circles.



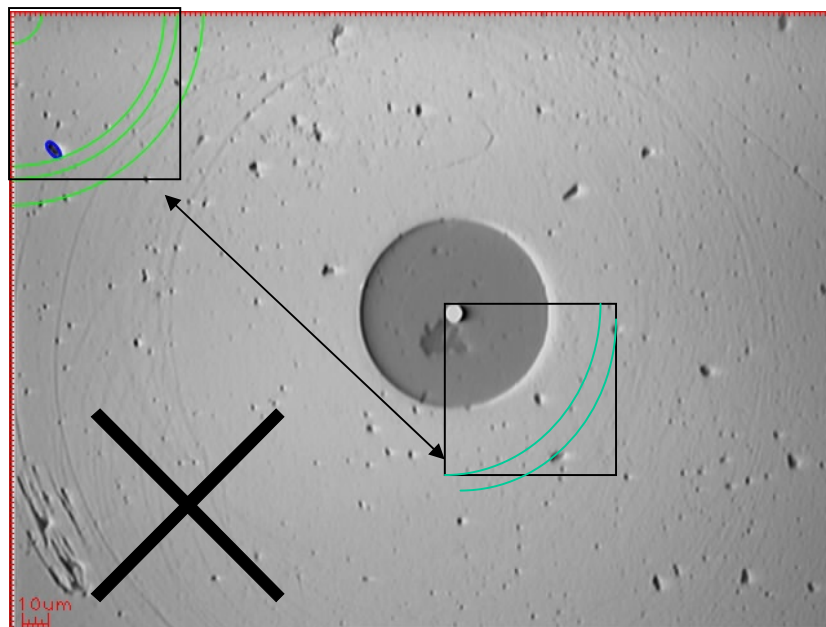
2.3.2 Incorrect Camera Profile Selection

An incorrect camera profile will give a wrong magnification scale ruler, wrong zone areas and wrong defects classification. The following are examples with wrong camera profile selection.



2.3.3 Extremely Wrong Camera Profile Selection

In case of an extremely mismatch camera profile, the system will fail to recognize the fiber at all, as shown below.

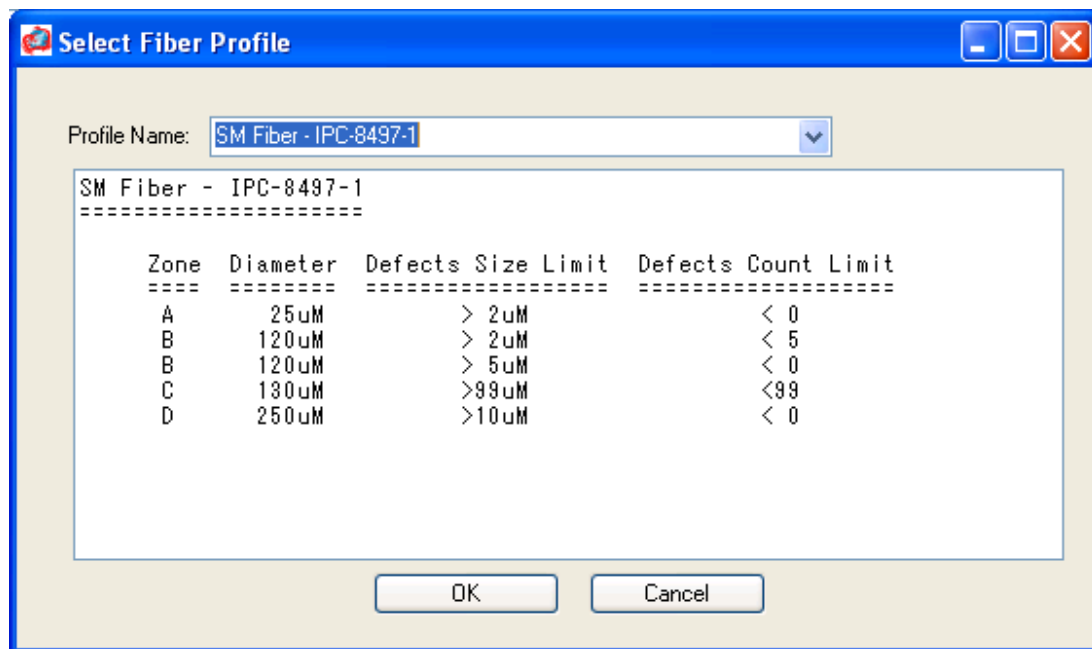


2.4 Fiber Profiles

Fiber Profiles define the passing criteria of the fiber endface under test. It defines the diameters of the four zones of interest of a fiber endface. It also defines the allowable size and quantity of defects in each zone.

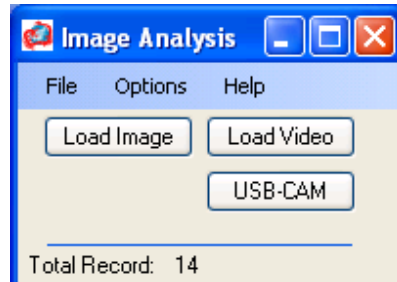
Four Fiber Profiles are defined. Please see the definitions in appendix “A.3 Defined Fiber Profiles”

Before starting an analysis, the required Fiber Profile must be selected first.



2.5 *Fiber End face Image Sources*

Three input sources of fiber end face images are accepted, i.e., image files, video files, and real time video captures from a fiberscope connected as a USB CAMERA.



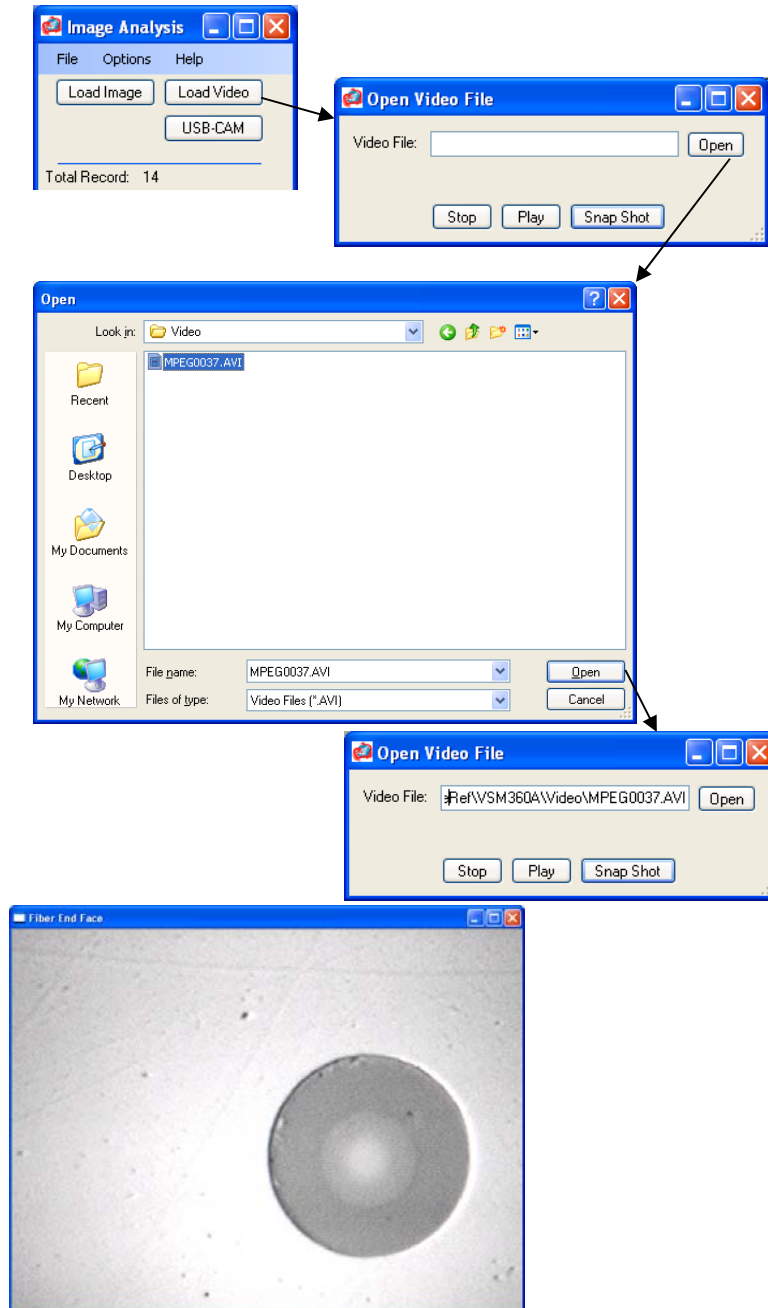
2.5.1 Capture Image by Loading Image File

Click the Load Image button, and a window will show up to allow selecting the image file.

After selecting the required file, the analysis result will be shown in a second.

2.5.2 Capture Image by Loading Video File

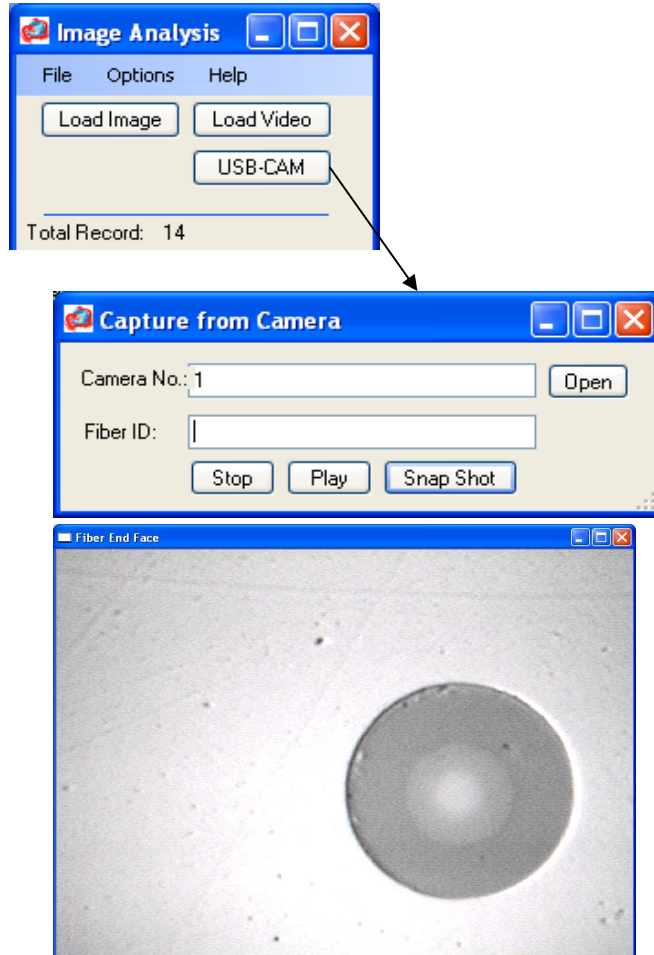
Click the Load Video button, and a window will show up to allow selecting the video file and then capturing (Snap Shot) the required frame for analysis.



When a nice image appears, simply click the Snap Shot button to capture the image, the analysis result will be shown in a second.

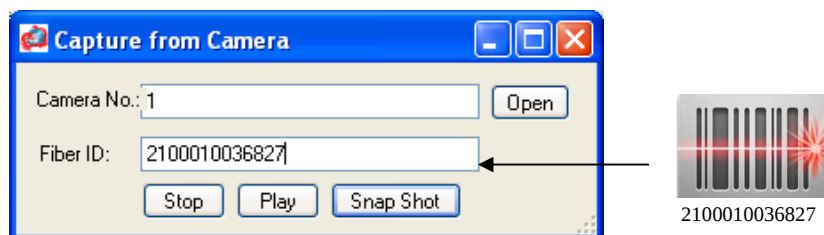
2.5.3 Capture Image Real Time from USB Camera

Click the USB-CAM button on the Image Analysis screen, the Capture from Camera screen will show up together with the Fiber End Face screen.



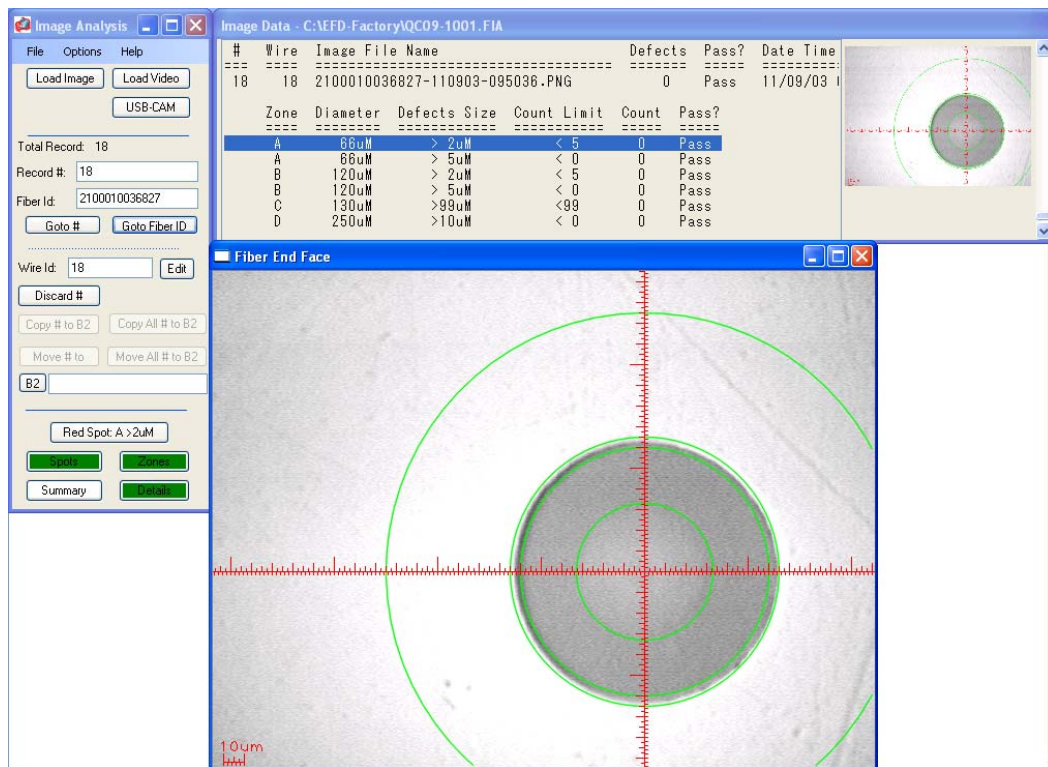
Enter the Fiber Id, and click the Snap Shot button to capture the image on screen. The Fiber Id can be entered manually as well as by a barcode scanner.

Many models of barcode scanner will also send an enter character at the end of sending the barcode numbers. That will trigger the Snap Shot button automatically. If not, simply click the Snap Shot key.



2.6 Analysis Result

Upon capturing the image from either source, the analysis will start and complete in a second. The following result screens will be shown.



3 Analysis Result Management

3.1 *Major Terms and Concepts*

3.1.1 Report Batch

All related analysis results are stored in a collection, called a batch.

A batch consists of a text file with extension “FIA” and a directory with extension “EFD”.

The directory contains all the original end face images and the fully markup images showing the analysis result, the defects, the four zone circles, the cross-hair rulers and a scale ruler at the corner.

3.1.2 Fiber Id & End Face Image File Name

Fiber Id

User can define unique Fiber Id for each piece of fiber end face. This can be a bar code label attached to the end face.

Image File Name

When the image source is captured real time from an attached fiberscope, the user can manually enter or scan the Fiber's Id and used it to form the end face image file name in the format,

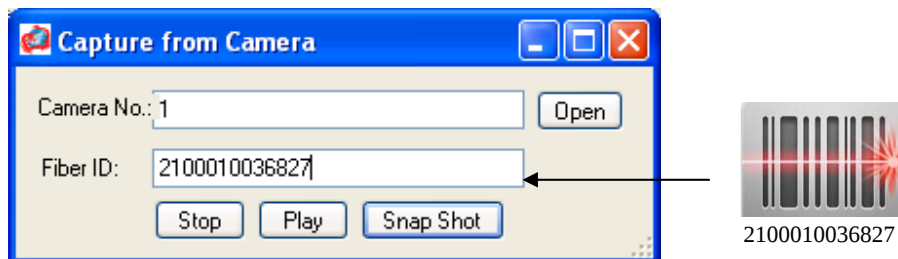
“nnnnnnnnn-YYMMDD-HHMNSS.PNG”

where nnnnnnnnn is the Fiber Id,
YYMMDD is the date of capture, and
HHMNSS is the time of capture
e.g., 2100010036827-110830-164102.PNG

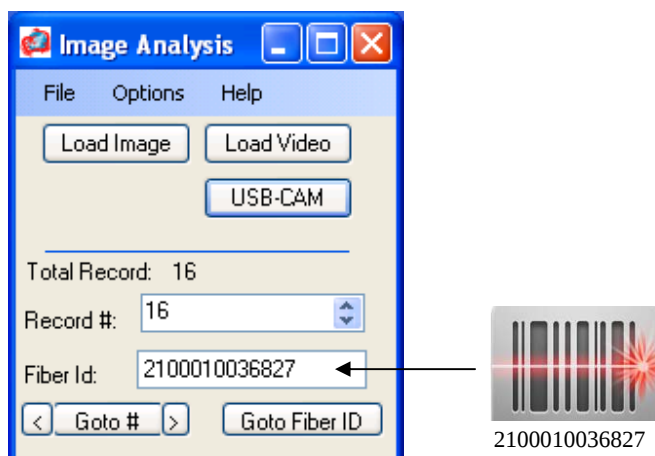
The end face image file name thus can both uniquely identify the fiber end face and the particular capture of the end face image.

Screens Accepting Barcode Fiber Id

Capture from Camera:

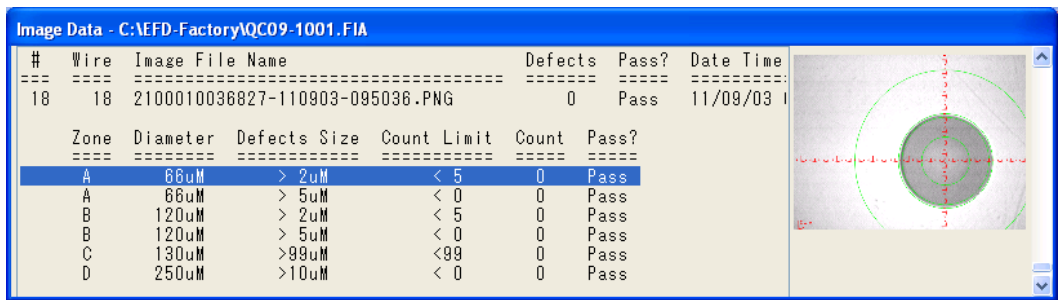


Go to Fiber ID:



3.1.3 Analysis Result Record & Result Record Identification

Each instance of analysis will give out an analysis result record that consists of a text block of quantitative result, with a fully marked-up end face image thumbnail.



An end face image file can be analyzed for multiple times, e.g., each time with a different Fiber Profile selected, each time gives out its own analysis result record.

In the text block of the result record, it contains the date and time of the analysis, which can be used to uniquely identity the particular analysis record.

3.2 Analysis Result Filing, Reviewing and Compilation

3.2.1 Analysis Result Filing

All related analysis result records are saved in a collection, called a batch.

A batch consists of a text file with extension “FIA” and a directory with extension “EFD”.

Batch name consists of a four-character Batch Prefix followed by the second part, which can be a sequence number or any meaningful short text string.

e.g., CU01-0001.FIA,
CU01-0002.FIA,
CU01-BEIJING-110930.FIA

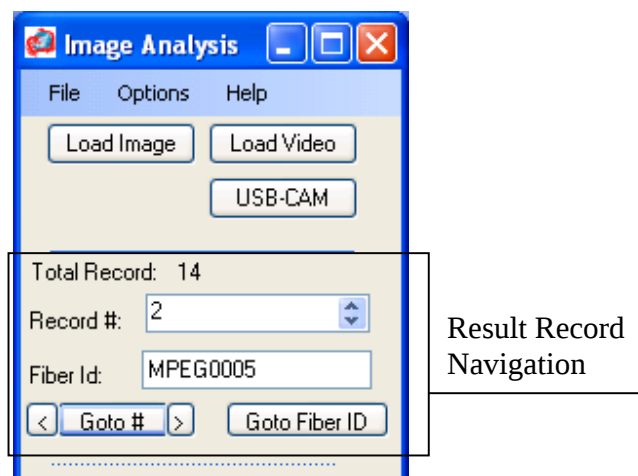
Upon installation, the default working directory is “C:\EndFaceImage” .

However, user can use other directories, or even create more new directories for EndFaceData to use.

3.2.2 Analysis Result Reviewing and Result Record Navigation

A batch can be open to review the analysis result record.

User can call up a particular result record either by,
Specifying the record number and go to it directly, or
Going to the next record sequentially, or
Going to the previous record sequentially, or
Searching by Fiber Id.



3.2.3 Searching by Fiber ID

In the case of searching by Fiber Id, if multiple result records exist in the batch, each record will be found in turn for each press of the Search button.

Image Analysis

File Options Help

Load Image Load Video

USB-CAM

Total Record: 18

Record #: 18

Fiber Id: 2100010036827

Goto # Goto Fiber ID

Wire Id: 18 Edit

Discard #

Copy # to B2 Copy All # to B2

Move # to Move All # to B2

B2

Red Spot: A >2uM

Spots Zones

Summary Details

You can go directly to any record by specifying the Record Number #, Or the

Fiber Id (Bar code Scanner supported)

Barcode

21000

Image Data - C:\VEFD-Factory\QC09-1001.FIA

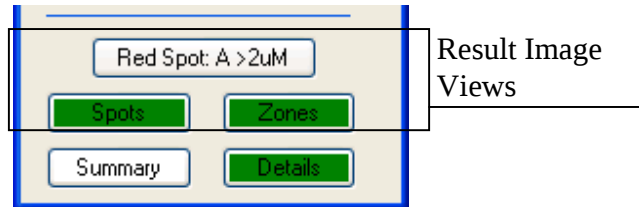
Wire	Image	File Name	Defects	Pass?	Date Time
18	18	2100010036827-110903-095036.PNG	0	Pass	11/09/03

Zone	Diameter	Defects	Size	Count	Limit	Count	Pass?
A	66uM	> 2uM	< 5	0	0	0	Pass
A	66uM	> 5uM	< 0	0	0	0	Pass
B	120uM	> 2uM	< 5	0	0	0	Pass
B	120uM	> 5uM	< 0	0	0	0	Pass
C	130uM	>99uM	<99	0	0	0	Pass
D	250uM	>10uM	< 0	0	0	0	Pass

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3.2.4 Result Image Views



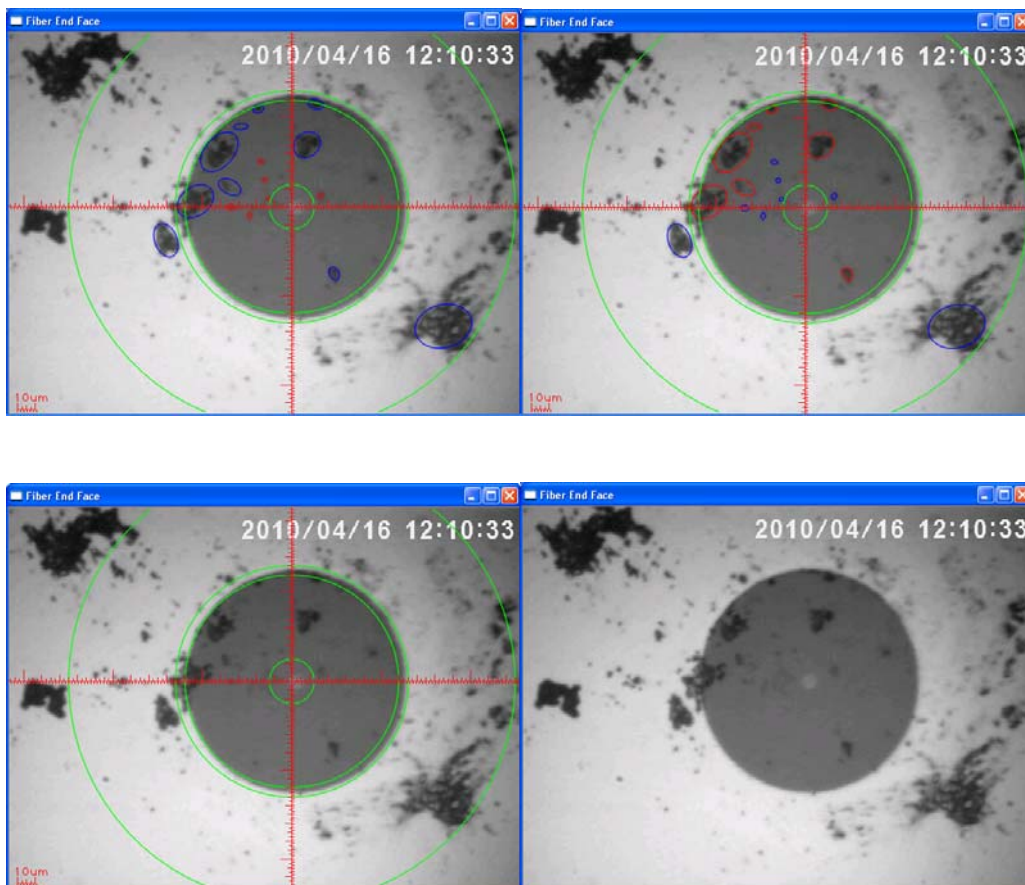
Clicking the following buttons will select different views of the end face image result shown in the Fiber End Face screen.

“Red Spot: ...” button will highlight the detected defects of each defect class in each zone in red in turn.

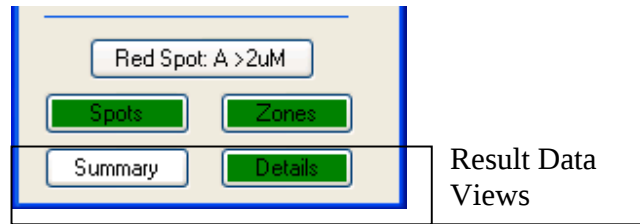
“Spots” button will toggle showing the defect spots markup on and off.

“Zones” button will toggle showing the four zone circles, the cross-hair rulers, and the scale ruler on and off.

The following are samples of the different views,



3.2.5 Result Data Views



Clicking the following buttons will select different views of the end face result data shown in the Image Data screen.

“Details” button will show the detail result records,

Image Data - C:\EndFaceImage\XX02-0016.FIA

Company: Eternal Science

Location: Cable ID:

Job #: Fibers From: To:

Technician: Date/Time: 2011-10-14 13:18:21

Notes: images from VSM360

Fiber Face Image Analysis Batch Report

#	Wire	Image File Name	Defects	Pass?	Date Time	
1	1	MPEG0002.PNG	24	Fail	11/10/14	
	Zone	Diameter	Defects Size	Count Limit	Count	Pass?
	A	25uM	> 2uM	< 0	2	Fail
	B	120uM	> 2uM	< 5	12	Fail
	B	120uM	> 5uM	< 0	9	Fail
	C	130uM	> 99uM	< 99	0	Pass
	D	250uM	> 10uM	< 0	1	Fail
2	2	MPEG0005.PNG	40	Fail	11/10/14	
	Zone	Diameter	Defects Size	Count Limit	Count	Pass?
	A	25uM	> 2uM	< 0	3	Fail
	B	120uM	> 2uM	< 5	18	Fail
	B	120uM	> 5uM	< 0	18	Fail
	C	130uM	> 99uM	< 99	0	Pass
	D	250uM	> 10uM	< 0	1	Fail

2017/04/18 12:01:30

2017/04/18 12:03:19

2018/04/18 12:10:33

“Summary” button will show the summary result records.

Image Data - C:\EndFaceImage\XX02-0016.FIA

Company:

Location: Cable ID:

Job #: Fibers From: To:

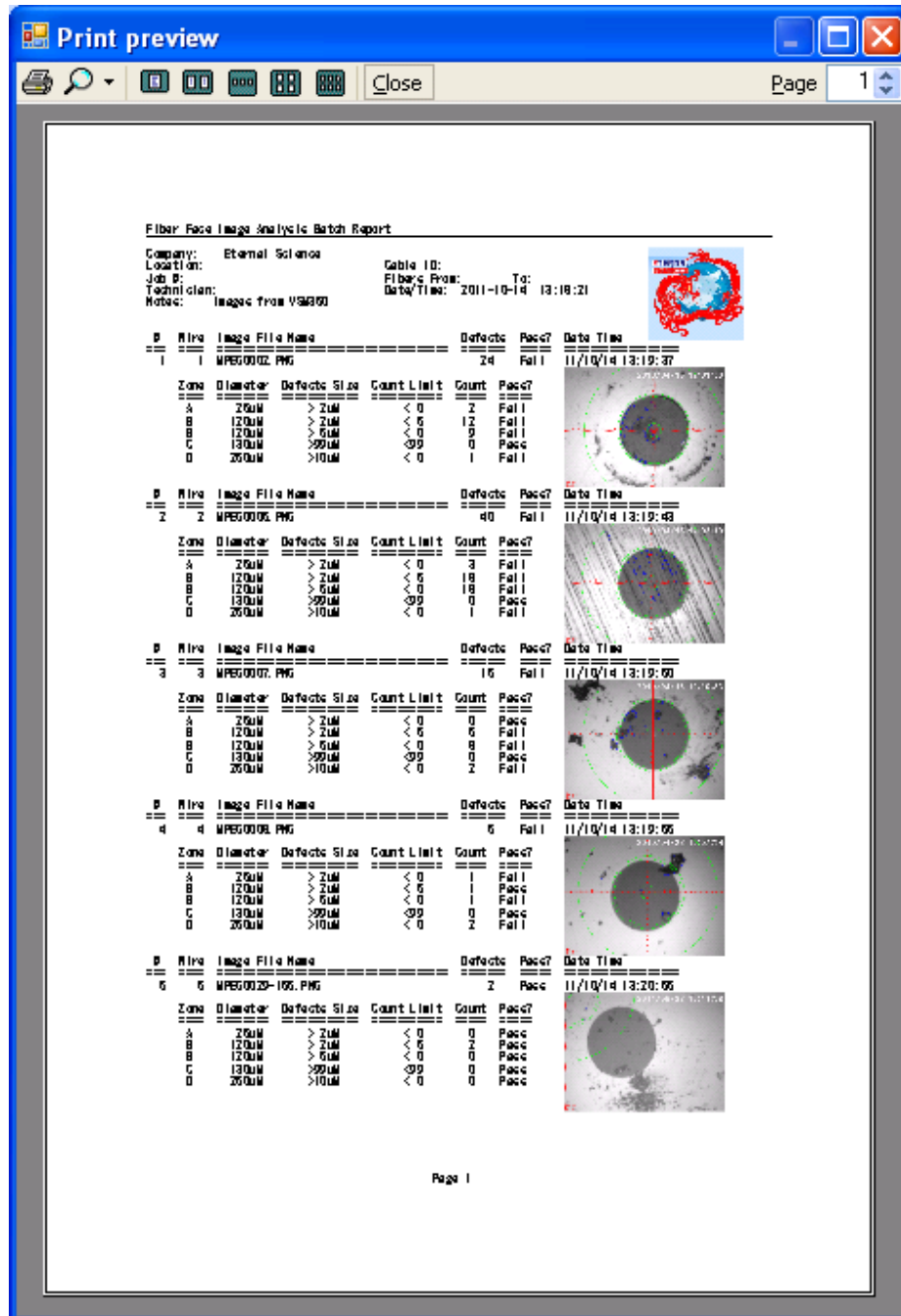
Technician: Date/Time:

Notes:

Fiber Face Image Analysis Batch Summary Report

#	Wire	Image File Name	Defects	Pass?	Date Time
1	1	MPEG0002.PNG	24	Fail	11/10/14 13:19:37
2	2	MPEG0005.PNG	40	Fail	11/10/14 13:19:43
3	3	MPEG0007.PNG	16	Fail	11/10/14 13:19:50
4	4	MPEG0008.PNG	5	Fail	11/10/14 13:19:58
5	5	MPEG0029-165.PNG	2	Pass	11/10/14 13:20:58
6	6	MPEG0029-328.PNG	4	Fail	11/10/14 13:21:58
7	7	MPEG0029-99.PNG	3	Fail	11/10/17 13:11:35
8	8	MPEG0029-48.PNG	19	Fail	11/10/17 13:12:09
9	9	MPEG0029-73.PNG	2	Fail	11/10/17 13:15:01
10	10	MPEG0029-53.PNG	2	Fail	11/10/17 13:15:26
11	11	MPEG0029-48.PNG	19	Fail	11/10/17 13:15:55
12	11	MPEG0029-48.PNG	19	Fail	11/10/17 13:15:55

3.2.6 Print Preview



3.2.7 Analysis Result Record Discard & Wire Id Edit

Total Record: 14

Record #: 2

Fiber Id: MPEG0005

< Goto # Goto Fiber ID >

Wire Id: 2 Edit

Discard #

Result Record Editing

Record Discard

Any unwanted result record can be deleted from the batch, by first calling up the record, then press the “Discard #” button.

Notes for hidden discarded image files

Discarded records and images will no longer show up in any report or screen review. **However, the image files remain in the batch director!** If this is not desired when distributing reports, user can use “Copy All Record to B2” to copy only all the valid result data and images to a brand new batch for distribution.

Wire Id Edit

Wire Id is a number used to identify a fiber end face. It is assigned sequentially by the EndFaceData upon image analysis. It can also be changed by the user anytime.

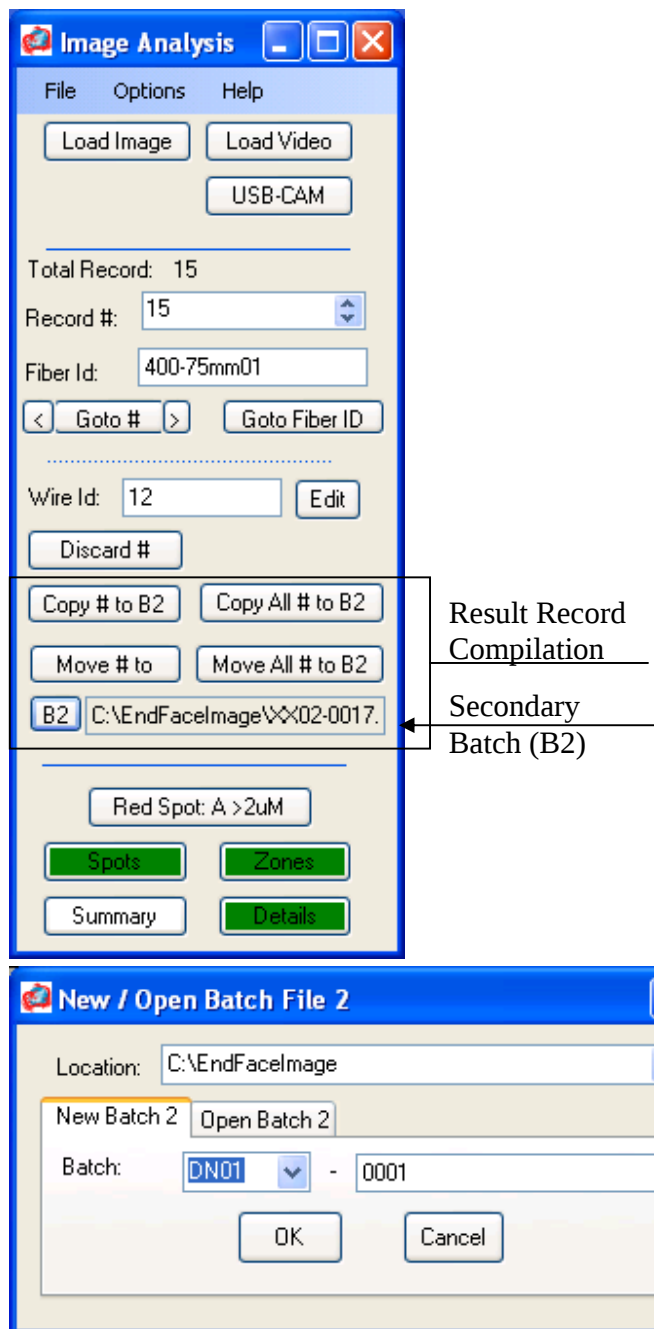
Whereas the Fiber Id is assigned while image capturing and cannot be changed afterwards..

Wire Id is useful when the user cannot dictate the Fiber Id during image capturing and has to assign an Id afterwards.

3.2.8 Analysis Result Compilation

User can extract any result records from any batch and append them into another batch, either for report printing or for batch report distribution later.

User can call up any result record from the primary open batch and then copy the record to the end of the secondary batch that has been opened or created via the “B2” button.



Copy Record # to B2

This will copy the valid current record in the primary batch to the secondary batch.

Copy All Record # to B2

This will copy all the valid records in the primary batch to the secondary batch.

Move Record to B2 / Move All Record to B2

In the primary batch, after a record has been moved out to the secondary batch, it will be shown with strike-through lines and become invalid. Any invalid record will not be copied out or moved out to any secondary batch again.

Image Data - C:\EndFaceImage\CU01-0001.FIA

End Face Image Analysis Batch Report

#	Wire	Image File Name	Defects	Pass?	Date Time
1	1	Cam1-032211-233950.PNG	6	Fail	11/09/02
Zone	Diameter	Defects Size	Count Limit	Count	Pass?
A	25uM	> 2uM	< 0	0	Pass
B	120uM	> 2uM	< 5	6	Fail
B	120uM	> 5uM	< 0	0	Pass
C	130uM	> 99uM	< 99	0	Pass
D	250uM	> 10uM	< 0	0	Pass

#	Wire	Image File Name	Defects	Pass?	Date Time
2	2	Cam1-032211-234152.PNG	6	Fail	11/09/02
Zone	Diameter	Defects Size	Count Limit	Count	Pass?
A	25uM	> 2uM	< 0	0	Pass
B	120uM	> 2uM	< 5	5	Pass
B	120uM	> 5uM	< 0	1	Fail
C	130uM	> 99uM	< 99	0	Pass
D	250uM	> 10uM	< 0	0	Pass

#	Wire	Image File Name	Defects	Pass?	Date Time
3	3	MPEG0003-46.PNG	27	Fail	11/09/02
Zone	Diameter	Defects Size	Count Limit	Count	Pass?
A	25uM	> 2uM	< 0	0	Pass
B	120uM	> 2uM	< 5	16	Fail
B	120uM	> 5uM	< 0	11	Fail
C	130uM	> 99uM	< 99	0	Pass
D	250uM	> 10uM	< 0	0	Pass

3.3 Analysis Result Reporting and Distribution

3.3.1 Hard Copies of Batch Reports - Simplest Way of Distribution

User can print a result batch in full on paper for review and for hardcopy distribution. This is the simplest way to distribute a batch of analysis results.

Fiber Face Image Analysis Batch Report

Company: Eternal Science

Location:

Job ID:

Technician:

Notes: Images from VSM300

Cable ID:

Fiber's From:

Data/Time:

To: 2011-10-14

13:18:21

#	Area	Image File Name	Defects	Pass?	Data Time
1	1	MPEG0002.PNG	24	Fail	11/10/14 13:19:37

Zone	Diameter	Defects Size	Count Limit	Count	Pass?
A	20um	> 2um	< 0	2	Fail
B	120um	> 2um	< 6	12	Fail
C	130um	> 6um	< 0	0	Pass
D	260um	> 10um	< 0	1	Fail

#	Area	Image File Name	Defects	Pass?	Data Time
2	2	MPEG0005.PNG	40	Fail	11/10/14 13:19:43

Zone	Diameter	Defects Size	Count Limit	Count	Pass?
A	20um	> 2um	< 0	3	Fail
B	120um	> 2um	< 6	18	Fail
C	130um	> 6um	< 0	0	Pass
D	260um	> 10um	< 0	1	Fail

#	Area	Image File Name	Defects	Pass?	Data Time
3	3	MPEG0007.PNG	16	Fail	11/10/14 13:19:50

Zone	Diameter	Defects Size	Count Limit	Count	Pass?
A	20um	> 2um	< 0	0	Pass
B	120um	> 2um	< 6	6	Fail
C	130um	> 6um	< 0	0	Pass
D	260um	> 10um	< 0	2	Fail

#	Area	Image File Name	Defects	Pass?	Data Time
4	4	MPEG0008.PNG	6	Fail	11/10/14 13:19:55

Zone	Diameter	Defects Size	Count Limit	Count	Pass?
A	20um	> 2um	< 0	1	Fail
B	120um	> 2um	< 6	1	Fail
C	130um	> 6um	< 0	0	Pass
D	260um	> 10um	< 0	2	Fail

#	Area	Image File Name	Defects	Pass?	Data Time
5	5	MPEG0009-105.PNG	2	Pass	11/10/14 13:20:05

Zone	Diameter	Defects Size	Count Limit	Count	Pass?
A	20um	> 2um	< 0	0	Pass
B	120um	> 2um	< 6	0	Pass
C	130um	> 6um	< 0	0	Pass
D	260um	> 10um	< 0	0	Pass

Page 1

3.3.2 Soft Copies of Press Quality Batch Reports in PDF Format Files

Alternatively, user can also print an analysis result batch to an Adobe PDF printer.

User can select the Press Quality option while printing. The soft copy report thus produced will allow zoom out to reveal very fine details of the end face image in Adobe PDF Reader on any PC.

However, user must have obtained the Adobe PDF printer from Adobe and installed it on the PC printing the report. On the PC reading the report, the Adobe PDF reader must have been installed.

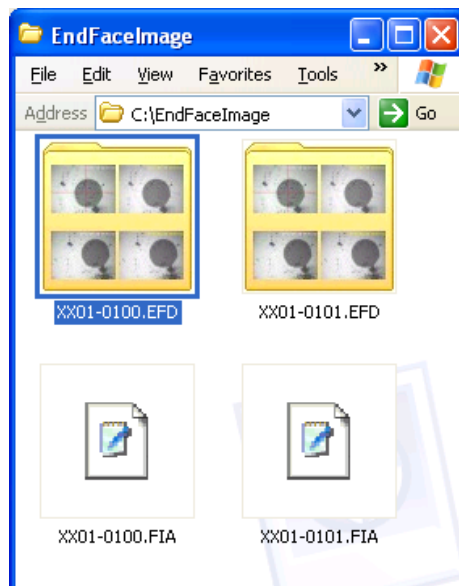
3.3.3 Sophisticated Report Viewing by Distributing Result Batch Files

User can directly distribute the analysis result batch files to their clients. This will allow the finest details and the greatest reviewing flexibility for the report receiver.

The report receiver can install the EndFaceData2 on their own PC and use its Reader mode to review and compile the reports in various flexible ways. Please see the previous section “3.2 Analysis Result Filing, Reviewing and Compilation” for details.

The report receiver needs to obtain and install the free EndFaceData2 in Reader Mode. Please see the following section “4.2 Reader Mode”

To distribute the batch XX01-0100.FIA, user should also distribute the directory XX01-0100.EFD together



4 License Dongle and Reader Mode

4.1 License Dongle

To enable the full functioning of the EndFaceData2, you need to plug the license control dongle into a USB port of your PC all the time. The license control dongle can be purchased through our sales channels. **Please see the appendix.**

With the license dongle plugged in, the following splash screen will be shown for 3 seconds during start up.



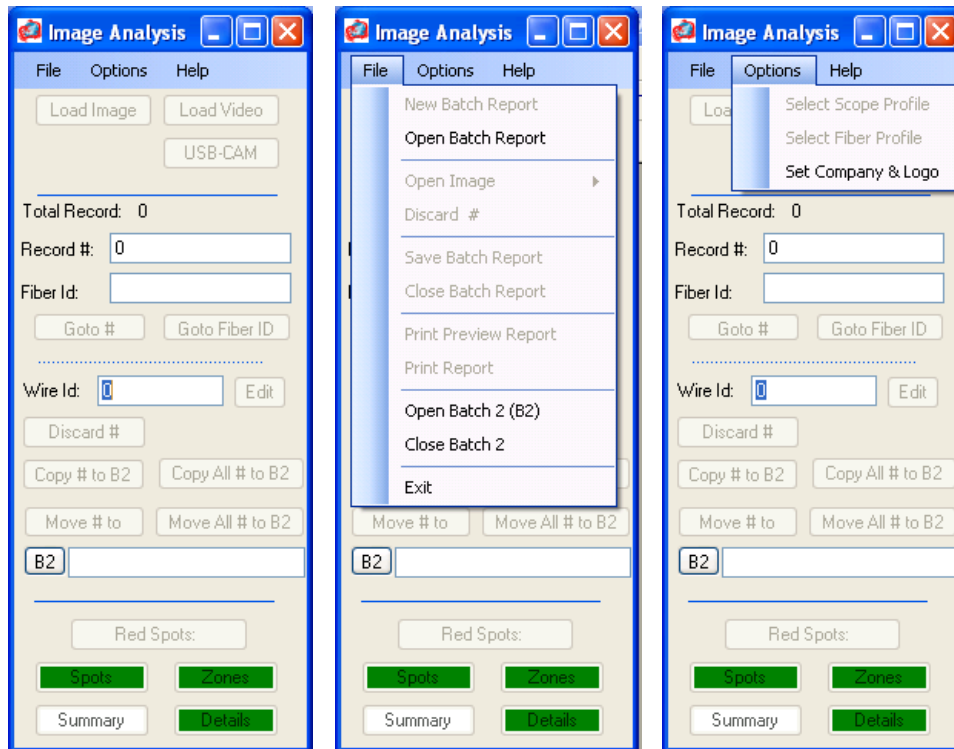
4.2 Reader Mode

The Reader Mode is designed for any user who has received end face image analysis result batches from others, to review, report and even to re-compile the received result batches.

If the EndFaceData starts up without the license control dongle, then it can only work in Reader Mode, with the following start up screen,



In Reader Mode, user cannot do any end face image analysis work.



5. Usage Tips

5.1 New Batch Creation

Batch name consists of a four-character Batch Prefix followed by the second part, which can be a sequence number or any meaningful short text string.

e.g., CU01-0001.FIA,
CU01-0002.FIA,
CU01-BEIJING-110930.FIA

5.1.1 Batch Prefix

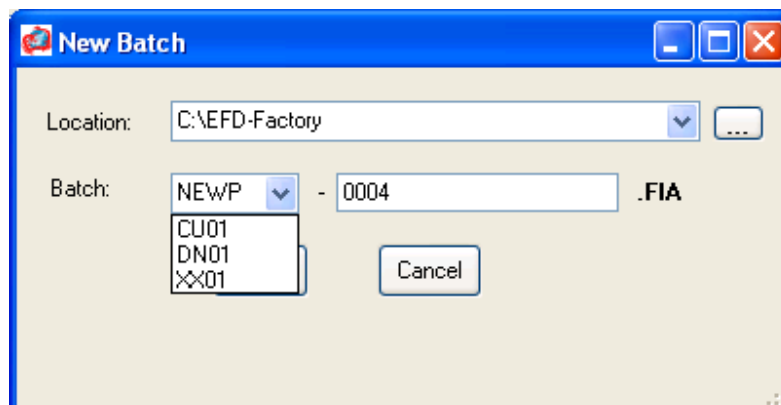
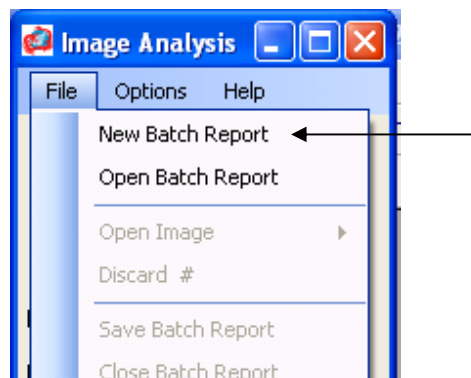
You can create your own four-character **Batch Prefix**,

e.g., NEWP

Simply type it in the New Batch screen when you need it.

It will be remembered once it is used.

But please don't create more than 20 Batch Prefix on a PC workstation.

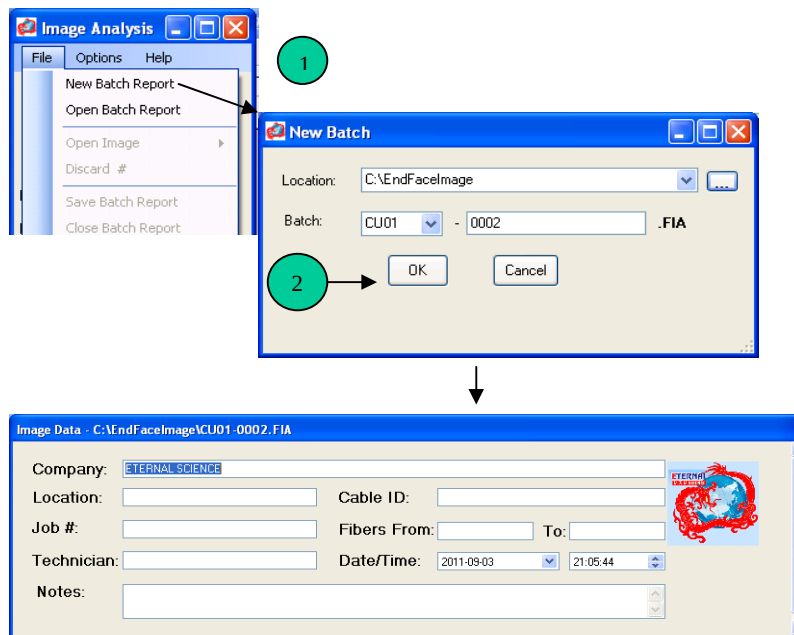


5.1.2 Quick Batch Creation with Batch Serial Number

Batch File name can be a **Batch Prefix** followed by a **Serial Number**, which is auto-incremented,

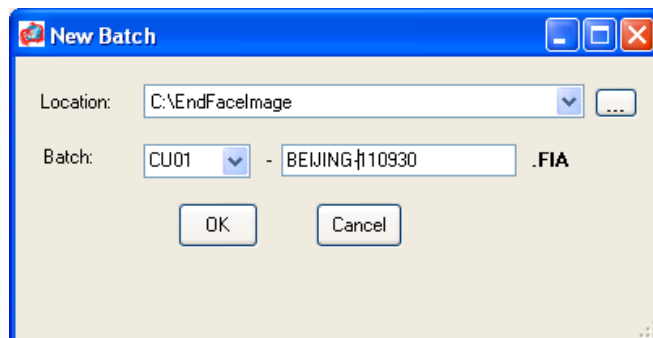
e.g., CU01-0001.FIA,
CU01-0002.FIA, ...

In this case, no typing required, just click, click, and the new file name and the new batch will be created automatically.



5.1.3 Meaningful Text for Batch Name

Alternatively, user can choose to use a short text as the batch file name, e.g., CU01-BEIJING-110930.FIA



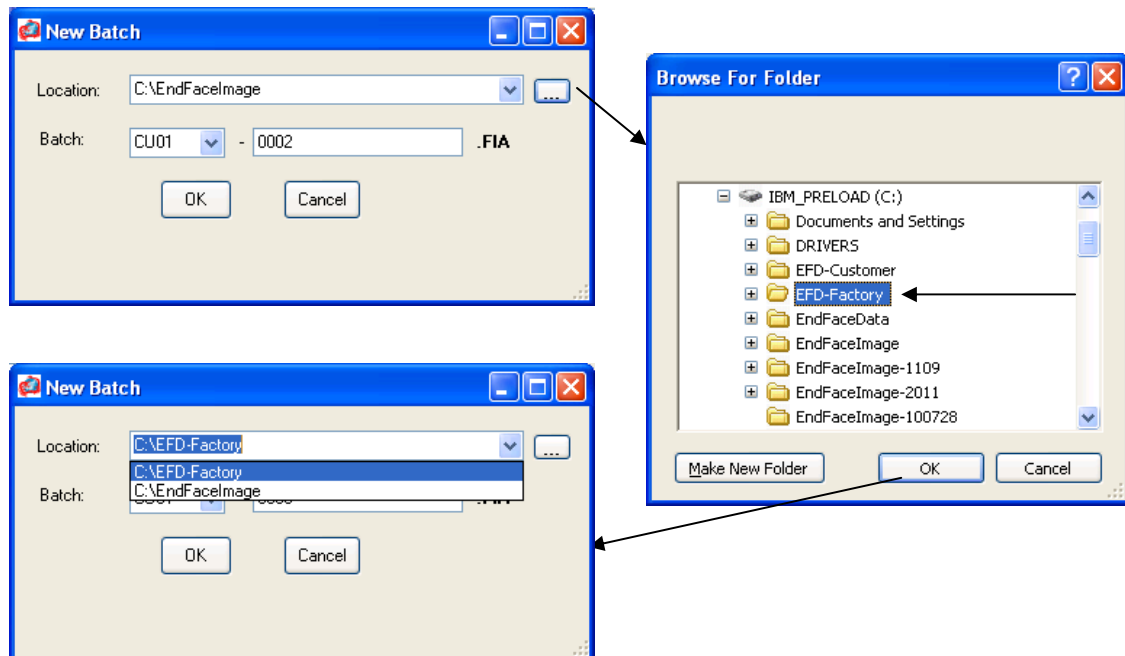
5.2 Working Directory

Upon installation, the default working directory is “C:\EndFaceImage”.

However, user can use other directories, or even create more new directories in EndFaceData.

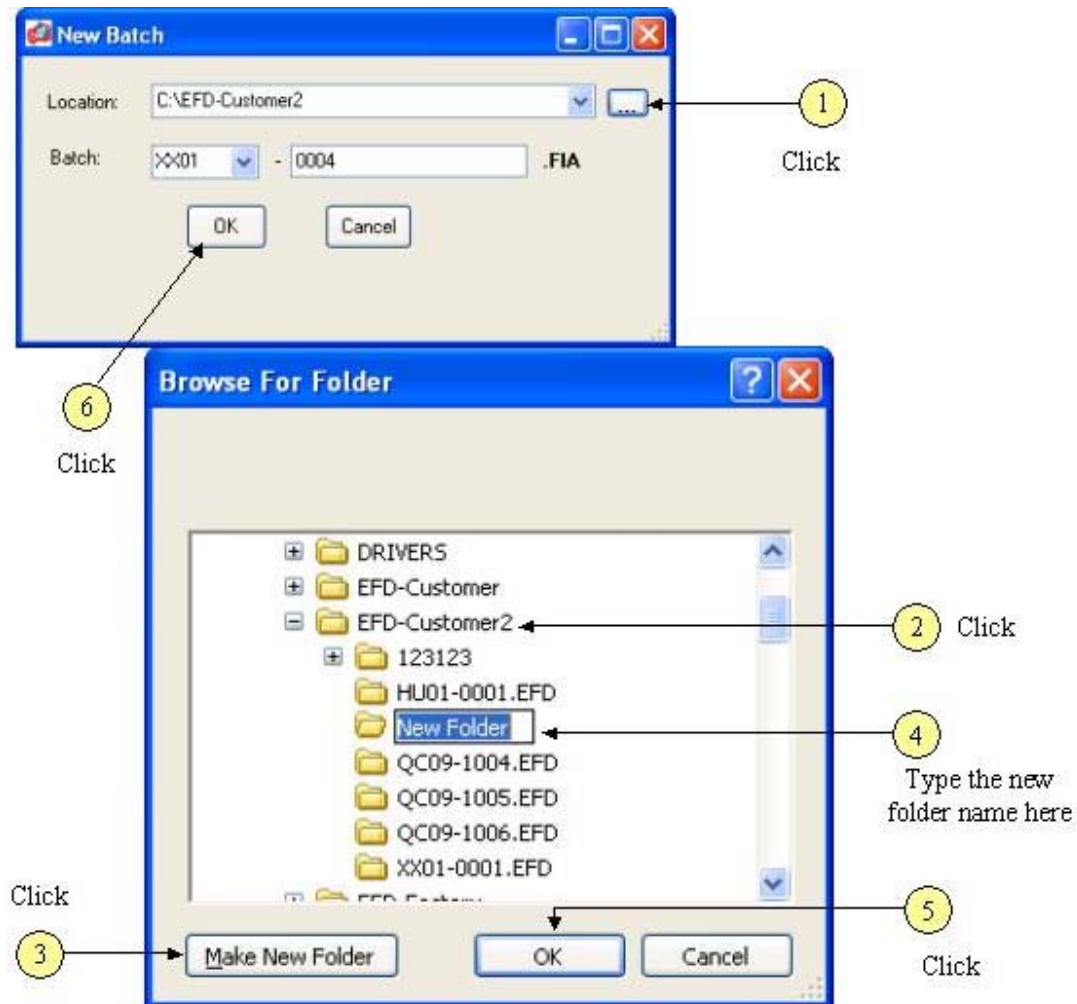
5.2.1 Select Other Directory

You can select other directories and elect to use them whenever you like. The directories (up to the 10 most recently used directories) will be remembered once you have used them.



5.2.2 Create New Directory in EndFaceData

You can even create new directories in EndFaceData.

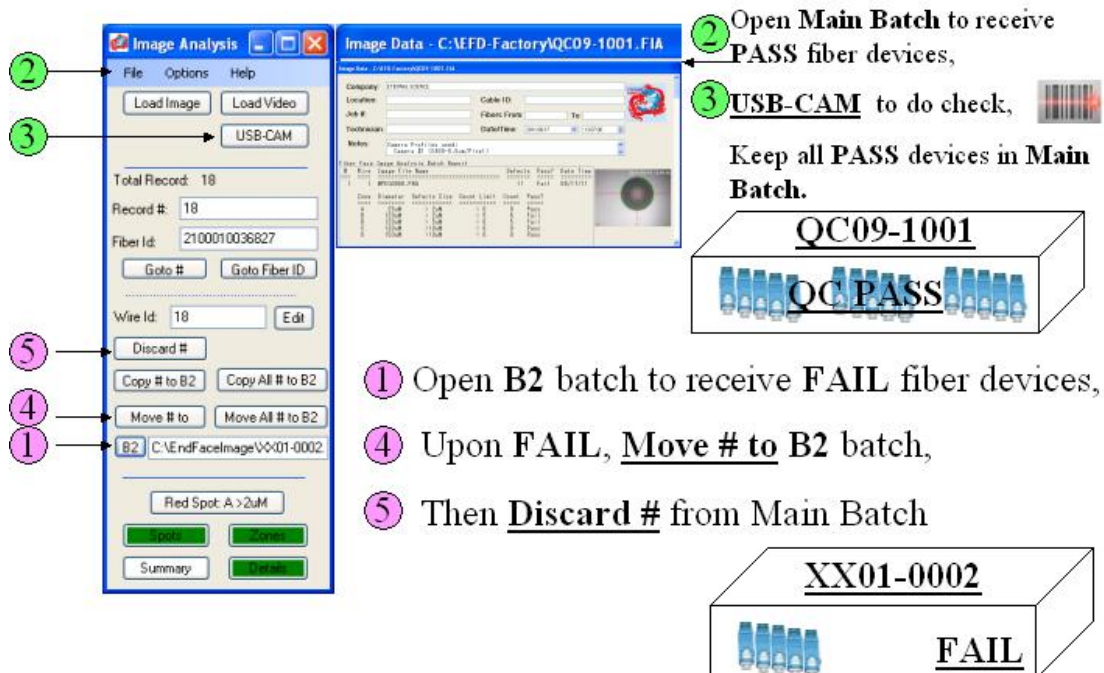


5.3 QC Workflow in Manufacturing Industry

In the QC department of a factory, the following workflow can be used to screen out and put aside those fail fiber modules, while keeping only those passed good fiber modules in the batch.

Produce Batches of Fiber Devices

in Convenient Batch Size of 100 Pieces Each



5.4 Picking Samples from a Batch for Delivery

When picking sample fiber modules from a pre-checked batch, the corresponding analysis result records can also be picked out and put together into a new batch, to be ready for delivery with the modules.

Pick for Sub-Batch Delivery – with Data Files



1 Open the main batch from the factory store

2 Create a new B2 batch to receive the fiber devices to be delivered, the location directory can be on a removable medium, e.g. the USB Memory Stick at E:\

3 Pick each Fiber Device

3 Double click at the previous Fiber Id

Scan the bar code to goto the Fiber Id automatically

4 Move the Record from the main batch to the B2 batch

5 Repeat **3** and **4** until all fiber devices has been picked.

6 Optionally open the completed B2 batch as main batch

7 & enter any delivery notes into its batch header.

QC09-1001
QC PASS

DN01-0002

Image Analysis

File Options Help

Load Image Load Video

USB-CAM

Total Record: 18

Record #: 16

Fiber Id: 21001020251E

Goto # Goto Fiber ID

Wire Id: 16 Edit

Discard #

Copy # to B2 Copy All # to B2

Move # to Move All # to B2

B2 E:\DN01-0002.FIA

Image Data - C:\EFD-Factory\QC09-1001.FIA

Company: ETERNAL SCIENCE

Location:

Job #:

Technician:

Notes: Camera Profiles used: Camera #1 (X400-0.5um/Pix)

Fiber Face Image Analysis Batch Report

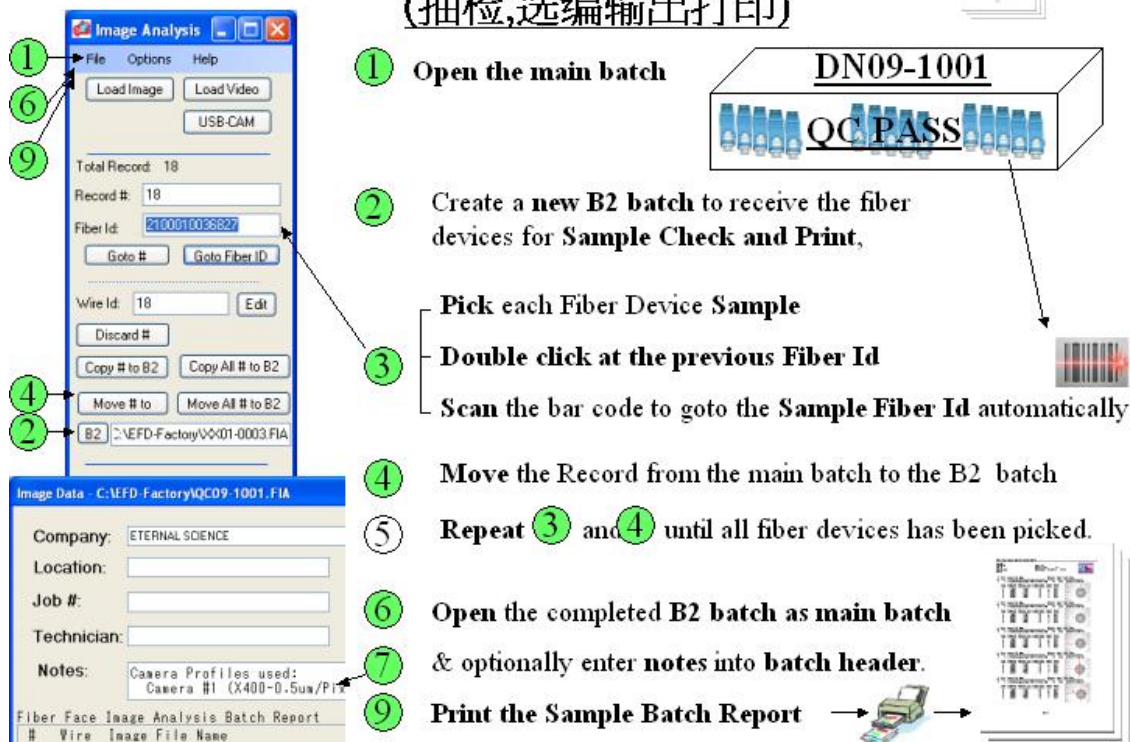
#	Wire	Image File Name

5.5 Sample Check and Print

When sample checking fiber modules from a batch, the corresponding analysis result records can also be picked out and put together into a new batch, ready to be print together in a nice looking report.

Sample Check and Print

(抽检,选编输出打印)



1 Open the main batch

2 Create a new **B2** batch to receive the fiber devices for Sample Check and Print,

3 Pick each Fiber Device Sample
Double click at the previous Fiber Id
Scan the bar code to goto the Sample Fiber Id automatically

4 Move the Record from the main batch to the B2 batch

5 Repeat **3** and **4** until all fiber devices has been picked.

6 Open the completed B2 batch as main batch

7 & optionally enter notes into batch header.

9 Print the Sample Batch Report

DN09-1001
QC PASS

Image Analysis

File Options Help

Load Image Load Video

USB-CAM

Total Record: 18

Record #: 18

Fiber Id: 2100010083822

Goto # Goto Fiber ID

Wire Id: 18 Edit

Discard #

Copy # to B2 Copy All # to B2

Move # to Move All # to B2

B2 C:\EFD-Factory\QC09-1001-0003.FIA

Image Data - C:\EFD-Factory\QC09-1001.FIA

Company: ETERNAL SCIENCE

Location:

Job #:

Technician:

Notes: Camera Profiles used: Camera #1 (X400-0.5um/Pix)

Fiber Face Image Analysis Batch Report

#	Wire	Image File Name
1	1	C:\EFD-Factory\QC09-1001-0003.FIA
2	1	C:\EFD-Factory\QC09-1001-0003.FIA
3	1	C:\EFD-Factory\QC09-1001-0003.FIA
4	1	C:\EFD-Factory\QC09-1001-0003.FIA
5	1	C:\EFD-Factory\QC09-1001-0003.FIA
6	1	C:\EFD-Factory\QC09-1001-0003.FIA
7	1	C:\EFD-Factory\QC09-1001-0003.FIA
8	1	C:\EFD-Factory\QC09-1001-0003.FIA
9	1	C:\EFD-Factory\QC09-1001-0003.FIA
10	1	C:\EFD-Factory\QC09-1001-0003.FIA
11	1	C:\EFD-Factory\QC09-1001-0003.FIA
12	1	C:\EFD-Factory\QC09-1001-0003.FIA
13	1	C:\EFD-Factory\QC09-1001-0003.FIA
14	1	C:\EFD-Factory\QC09-1001-0003.FIA
15	1	C:\EFD-Factory\QC09-1001-0003.FIA
16	1	C:\EFD-Factory\QC09-1001-0003.FIA
17	1	C:\EFD-Factory\QC09-1001-0003.FIA
18	1	C:\EFD-Factory\QC09-1001-0003.FIA

Appendix

A.1 System Installation

A.1.1 Install the EndfaceData

The release contents may come in the form of a CD, or in the form of a downloadable zip file that should be unzipped to a CD or any convenient directory. Then the installation procedures will be the same as the following.

Contents of the release CD EndFaceData2:

EFD-2.2.0.7-ReleaseDoc.txt -- This Document

setup.exe -- The installer for the EndFaceData2-2.2.0.7 application and some pre-requisites.

EM2820_USB_Video-5_7_0129 -- The USB Video Driver for the Fiber Scope Probe

To install the application:

To install the EndFaceData2, simply insert the CD into your CD drive. It will auto-run the installer.

However, if the auto-run does not happen, simply double click the setup.exe on the CD, e.g., E:\setup.exe. You should substitute the letter E with your CD's drive letter in this case.

Then, simply follow the on-screen prompts until the installation is completed.

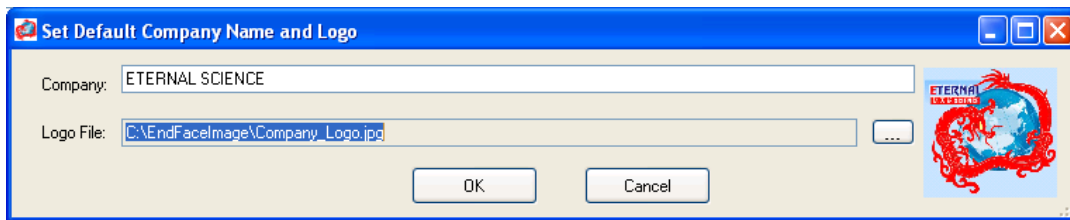
To install the USB Video Driver:

1. Plug the Fiber Scope Probe into a USB port.
2. When the PC prompts you for the USB device driver for the new detected USB hardware Device 2820, ask it to search the relevant directory in your inserted CD for the driver, i.e., if E is your CD's drive letter, enter the directory
E:\EM2820_USB_Video-5_7_0129
3. Follow the on-screen prompts until the installation is completed.

A.1.2 Setup Default Company Name and Logo

Every time when a new batch is created, its batch header will be automatically entered the default company name and logo.

To setup the default company name and logo, go to the Image Analysis screen, click Options – Set Company & Logo , the following screen will be shown.



- A.2 Supported Fiber Scope Models

Currently, the following fiber scope models from Eternal Science are supported:

Fiber Scope Profile	Supported Fiber Models
FTN-450-400	FTN-450-400
FTN-450-400-CX	FTN-450-400-CX
FTN-450-200	FTN-450-200
FTN-450-80	FTN-450-80
FVO-600B	FVO-600B
VSM360	FVO600A-V (<i>before Oct/2010</i>)
VSM360A	FVO600A-V (<i>after Oct/2010</i>)

A.3 Defined Fiber Profiles

A.3.1 SM Fiber - IPC-8497-1 for Single Mode Fiber, 125um diameter

SM Fiber - IPC-8497-1
=====

Zone	Diameter	Defects Size Limit	Defects Count Limit
====	=====	=====	=====
A	25uM	> 2uM	< 0
B	120uM	> 2uM	< 5
B	120uM	> 5uM	< 0
C	130uM	>99uM	<99
D	250uM	>10uM	< 0

A.3.2 MM Fiber - IPC-8497-1 for Multi-Mode Fiber, 125um diameter

MM Fiber - IPC-8497-1
=====

Zone	Diameter	Defects Size Limit	Defects Count Limit
====	=====	=====	=====
A	66uM	> 2uM	< 5
A	66uM	> 5uM	< 0
B	120uM	> 2uM	< 5
B	120uM	> 5uM	< 0
C	130uM	>99uM	<99
D	250uM	>10uM	< 0

A.3.3 SM - 125um Fiber, 250um Zone D for Single Mode Fiber

SM - 125um Fiber, 250um Zone D
=====

Zone	Diameter	Defects Size Limit	Defects Count Limit
=====	=====	=====	=====
A	25uM	> 2uM	< 0
B	120uM	> 2uM	< 5
B	120uM	> 5uM	< 0
C	130uM	>10uM	< 0
D	250uM	>10uM	< 0

A.3.4 SM - 125um Fiber, 1.25mm Zone D for Single Mode Fiber

SM - 125um Fiber, 1.25mm Zone D
=====

Zone	Diameter	Defects Size Limit	Defects Count Limit
=====	=====	=====	=====
A	25uM	> 2uM	< 0
B	120uM	> 2uM	< 5
B	120uM	> 5uM	< 0
C	130uM	>10uM	< 0
D	1500uM	>10uM	< 0

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