UNIÓN INTERNACIONAL DE TELECOMUNICACIONES

UIT-T
SECTOR DE NORMALIZACIÓN
DE LAS TELECOMUNICACIONES
DE LA UIT

T.37
Enmienda 1
(09/99)

SERIE T: TERMINALES PARA SERVICIOS DE TELEMÁTICA

Procedimientos para la transferencia de datos facsímil en modo almacenamiento y retransmisión por Internet
Enmienda 1: Modo completo

Recomendación UIT-T T.37 – Enmienda 1

Para más información, véase la Lista de Recomendaciones del UIT-T.

RECOMENDACIÓN UIT-T T.37

PROCEDIMIENTOS PARA LA TRANSFERENCIA DE DATOS FACSÍMIL EN MODO ALMACENAMIENTO Y RETRANSMISIÓN POR INTERNET

ENMIENDA 1

Modo completo

Resumen

Esta enmienda incorpora el modo completo del facsímil Internet a la Recomendación T.37. La funcionalidad adicional incorpora la transmisión y la recepción de otros formatos de imagen TIFF, intercambio de capacidades y acuse de recibo.

Orígenes

PREFACIO

La UIT (Unión Internacional de Telecomunicaciones) es el organismo especializado de las Naciones Unidas en el campo de las telecomunicaciones. El UIT-T (Sector de Normalización de las Telecomunicaciones de la UIT) es un órgano permanente de la UIT. Este órgano estudia los aspectos técnicos, de explotación y tarifarios y publica Recomendaciones sobre los mismos, con miras a la normalización de las telecomunicaciones en el plano mundial.

La Conferencia Mundial de Normalización de las Telecomunicaciones (CMNT), que se celebra cada cuatro años, establece los temas que han de estudiar las Comisiones de Estudio del UIT-T, que a su vez producen Recomendaciones sobre dichos temas.

La aprobación de Recomendaciones por los Miembros del UIT-T es el objeto del procedimiento establecido en la Resolución N.° 1 de la CMNT.

En ciertos sectores de la tecnología de la información que corresponden a la esfera de competencia del UIT-T, se preparan las normas necesarias en colaboración con la ISO y la CEI.

NOTA

En esta Recomendación, la expresión "Administración" se utiliza para designar, en forma abreviada, tanto una administración de telecomunicaciones como una empresa de explotación reconocida de telecomunicaciones.

PROPIEDAD INTELECTUAL

La UIT señala a la atención la posibilidad de que la utilización o aplicación de la presente Recomendación suponga el empleo de un derecho de propiedad intelectual reivindicado. La UIT no adopta ninguna posición en cuanto a la demostración, validez o aplicabilidad de los derechos de propiedad intelectual reivindicados, ya sea por los miembros de la UIT o por terceros ajenos al proceso de elaboración de Recomendaciones.

En la fecha de aprobación de la presente Recomendación, la UIT ha recibido notificación de propiedad intelectual, protegida por patente, que puede ser necesaria para aplicar esta Recomendación. Sin embargo, debe señalarse a los usuarios que puede que esta información no se encuentre totalmente actualizada al respecto, por lo que se les insta encarecidamente a consultar la base de datos sobre patentes de la TSB.

ÍNDICE

PROCEDIMIENTOS PARA LA TRANSFERENCIA DE DATOS FACSÍMIL EN MODO ALMACENAMIENTO Y RETRANSMISIÓN POR INTERNET

ENMIENDA 1

Modo completo

(Ginebra, 1999)

1) Cláusula 3

Suprímanse las siguientes referencias:

– Recomendación CCITT T T.6 (1988), *Esquemas de codificación facsímil y funciones de control de codificación para los aparatos facsímil del grupo 4.*

– RFC 1725, *Post Office Protocol – Version 3.*

Añádanse las referencias y la nota siguientes:

– RFC 1869, SMTP Service Extensions.

– RFC 1939, Post Office Protocol – Version 3.

– RFC 2060, Internet Message Access Protocol – Version 4rev1.

– RFC 2298, An Extensible Message Format for Message Disposition Notification.

– RFC 2532, Extended Facsimile Using Internet Mail.

– RFC 2530, Indicating Supported Media Features Using Extensions to DSN and MDN.

– RFC 2531, Content feature schema for Internet fax.

NOTA – Las referencias incluidas en las RFC referenciadas en esta Recomendación, que se describen como "trabajos en curso", sólo son informativas y no normativas.

2) Subcláusula 6.2

Enmiéndese la subcláusula 6.2 para que diga lo siguiente:

6.2 Modo completo

El modo completo soporta la transferencia de imágenes, datos, intercambio de capacidades y acuse de recepción, según los requisitos de la Recomendación F.185.

6.2.1 Procedimientos del modo completo

En el cuadro se incluye un resumen funcional y las referencias conexas del modo completo. Los procedimientos de modo completo se definen en RFC 2532, a menos que se señale lo contrario en el cuadro 2.

Cuadro 2/T.37 – Resumen funcional de los procedimientos del modo completo

Direccionamiento	Procedimientos: RFC 2305, sección 3 Correo electrónico: RFC 822 Offramp: RFC 2303, RFC 2304
Formato de imagen	Perfiles TIFF: RFC 2301
Acuse de recepción	Confirmación de entrega: RFC 1891, Notificación de situación de entrega (DSN, *delivery status notification*) Confirmación de procesamiento: RFC 2298, Notificación de disposición de mensaje (MDN, *message disposition notification*)
Intercambio de capacidades	Formato de capacidades: RFC 2531 Mecanismo de capacidades: RFC 2530
Transporte	ESMTP: RFC 1869
Acceso a buzón	POP3: RFC 1939 IMAP4: RFC 2060
NOTA – El requisito de que las pasarelas dentro de rampa y fuera de rampa soporten los terminales facsímil del grupo 4 queda en estudio.	

3) Apéndice I

Añádase una nueva subcláusula I.2:

I.2 Requisitos de la implementación del modo completo

Cuadro I.2/T.37 – Requisitos de la implementación del modo completo

Emisor		
Requerido	Enviar datos de imagen como un solo fichero RFC 2301 multipágina MIME	RFC 2305 § 2.2.3
	Efectuar una notificación en caso de problemas de reenvío	RFC 2305 § 2.3.1
	Dar una dirección de retorno en el correo SMTP en el encabezamiento del sobre	RFC 2305 § 2.3.1
	Pedir notificación de situación de entrega, si el emisor desea confirmación de entrega	RFC 2532 § 2.1.1 (Nota 3)
	Pedir notificación de disposición de mensaje, si el emisor desea confirmación de procesamiento	RFC 2532 § 2.1.2 (Nota 3)
Muy recomendado	Incluir ID de mensaje	RFC 2305 § 2.2.1
	Utilizar la codificación de base 64 para datos de imagen	
	Ser capaz de reconocer y procesar los rótulos de características definidos en RFC 2531 cuando se examinan las capacidades presentadas por un posible receptor	RFC 2532 § 3 (Nota 2)
Opcional	Utilizar otros perfiles de TIFF si se conoce previamente que el receptor soporta dichos perfiles	RFC 2305 § 4
	Notificar la recepción de una DSN u otras notificaciones	RFC 1894 (Nota 3)
	Pedir una DSN positiva y una MDN, si se desea respuesta de capacidad DSN/MDN	RFC 2532 § 3.3 (Notas 1, 2 y 4)
	Enviar un mensaje que contenga un subconjunto mínimo de TIFF y un TIFF de superior calidad utilizando multiparte/alternativo	RFC 2532 § 3
	Contraordenar manualmente la fijación por defecto	RFC 2532 § 3.1
	Acceder a la estructura de directorio de las capacidades del receptor	RFC 2532 § 3.2
	Utilizar cualquiera de los perfiles de TIFF definidos en RFC 2301 cuando se emite un receptor con las capacidades correspondientes basadas en la respuesta de capacidad MDN/DSN	RFC 2532 § 3 (Notas 1, 2 y 4)

Receptor		
Requerido	Cumplir con MIME con la salvedad de que no es necesario que se ofrezca situar una asociación de MIME en un fichero y que puede imprimir un fichero recibido en vez de visualizarlo	RFC 2305 § 2.2.2
	Ser capaz de procesar múltiples ficheros de imagen de perfil S RFC 2301 MIME de un solo mensaje	RFC 2305 § 2.2.4
	Efectuar una notificación en caso de problemas de recepción o procesamiento	RFC 2305 § 2.3.2 (Nota 3)
	Implementar notificación de disposición de mensaje	RFC 2532 § 2.2 (Notas 1, 2 y 4)
	Indicar características de medios soportadas en mensajes DSN y/o MDN por RFC 2530	RFC 2532 § 2.2
	Configurable para ignorar silenciosamente una petición de MDN	RFC 2532 § 2.2.1
	No generar una MDN no solicitada para indicar procesamiento exitoso	RFC 2532 § 2.2.1
	Es posible para un operador desactivar respuestas de MDN automáticas	RFC 2532 § 2.2.1
	No generar DSN cuando se utiliza POP3 e IMAP4	RFC 2532 § 2.2.2
Muy recomendado	Si el MTA determina que el mensaje no puede ser procesado, rechazar el mensaje con un código de situación 5.6.1	RFC 2530 (Nota 3)
Opcional	Ser capaz de procesar cualesquiera de los perfiles TIFF	RFC 2305 § 4
	El sistema automatizado debe ser configurable para responder siempre a una petición de MDN	RFC 2532 § 2.2.1
Infraestructura del emisor		
Requerido	Soportar la DSN	RFC 2532 § 2.3.1 (Nota 5)
Infraestructura del receptor		
Requerido	Soportar la DSN	RFC 2532 § 2.3.2 (Nota 5)
Pasarela fuera de rampa (Cuando se implementa)		
Requerido	Cumplir el SMTP	RFC 0821
	Notificar un fallo de entrega	RFC 1894, RFC 2305 § 2.3.1 (Nota 3)
	Ser capaz de procesar direcciones de correo electrónico RTPC/facsímil	RFC 2303, RFC 2304
	Cumplir las Recomendaciones UIT pertinentes relativas a la transmisión facsímil	T.30
	Reenviar correo electrónico autorizado a los terminales facsímil del grupo 3 correspondientes	RFC 2305 § 3.2
	Garantizar el cumplimiento de los requisitos locales de tipo legal relativos a las transmisiones facsímil	
Muy recomendado	Utilizar una DSN para notificar un fallo de entrega	RFC 2305 § 2.3.1 RFC 1894 Nota 3
	Utilizar un protocolo de acceso a buzón de correos cuando se dé servicio a un solo receptor del correo	RFC 2305 § 2.1.3
Opcional	Traducir los datos de imagen a un formato que pueda aceptar el terminal facsímil del grupo 3 receptor	RFC 2305 § 2.1.2
	Utilizar un protocolo de acceso a buzón de correos cuando se dé servicio a un solo receptor del correo	RFC 2305 § 2.1.3

Cuadro I.2/T.37 *(fin)*

NOTA 1 – La implementación típica del modo completo incluye intercambio de capacidades. El método disponible para obtener una respuesta de capacidad es solicitando una MDN o una DSN. En respuesta, el receptor debe proporcionar una indicación de capacidades que utilice ampliaciones de DSN/MDN por ampliación RFC 2530. El método detallado de solicitar MDN/DSN y el uso de otros métodos de petición e indicación de capacidades quedan en estudio.

NOTA 2 – Para la implementación típica del modo completo, la DSN o MDN que se devuelve debe contener información que describa las capacidades del receptor. El emisor debe utilizar esta información para comunicaciones posteriores con ese receptor. Por ejemplo, un emisor puede utilizar cualquiera de los perfiles TIFF definidos en RFC 2301 cuando envía a un receptor cuyas capacidades correspondientes están basadas en una respuesta de capacidad MDN/DSN.

NOTA 3 – Para la implementación típica del modo completo, se dispone de confirmación de entrega y confirmación de procesamiento utilizando DSN y MDN. La clarificación del procesamiento de MDN queda en estudio. La inclusión de datos adicionales tales como el número total de páginas y el número de páginas erróneas en un mensaje MDN o DSN queda en estudio.

NOTA 4 – Algunos implementadores pueden desear añadir ampliaciones privadas a la implementación normalizada del modo completo. Por ejemplo, los vendedores podrían encontrar tipos de MIME específicos de la empresa y encabezamiento de correo electrónico X para ayudar a implementar aplicaciones específicas.

NOTA 5 – Según RFC 2532, se requiere soporte de DSN en la infraestructura del emisor y del receptor. Los terminales de modo completo pueden seguir funcionando en situaciones en los que algunos MTA en el trayecto de reenvío de correo pueden no soportar DSN. No se proveerá en este caso confirmación de entrega mediante DSN para el destino final. Sin embargo sigue siendo posible la confirmación de procesamiento mediante MDN.

4) Nuevo Apéndice III

Añádase un nuevo apéndice III:

Apéndice III

Diagrama de referencias RFC relativas al modo completo

El presente apéndice contiene un diagrama de las relaciones entre las normas de Internet utilizadas para la funcionalidad modo completo de la Recomendación T.37.

T0828420-98/d01
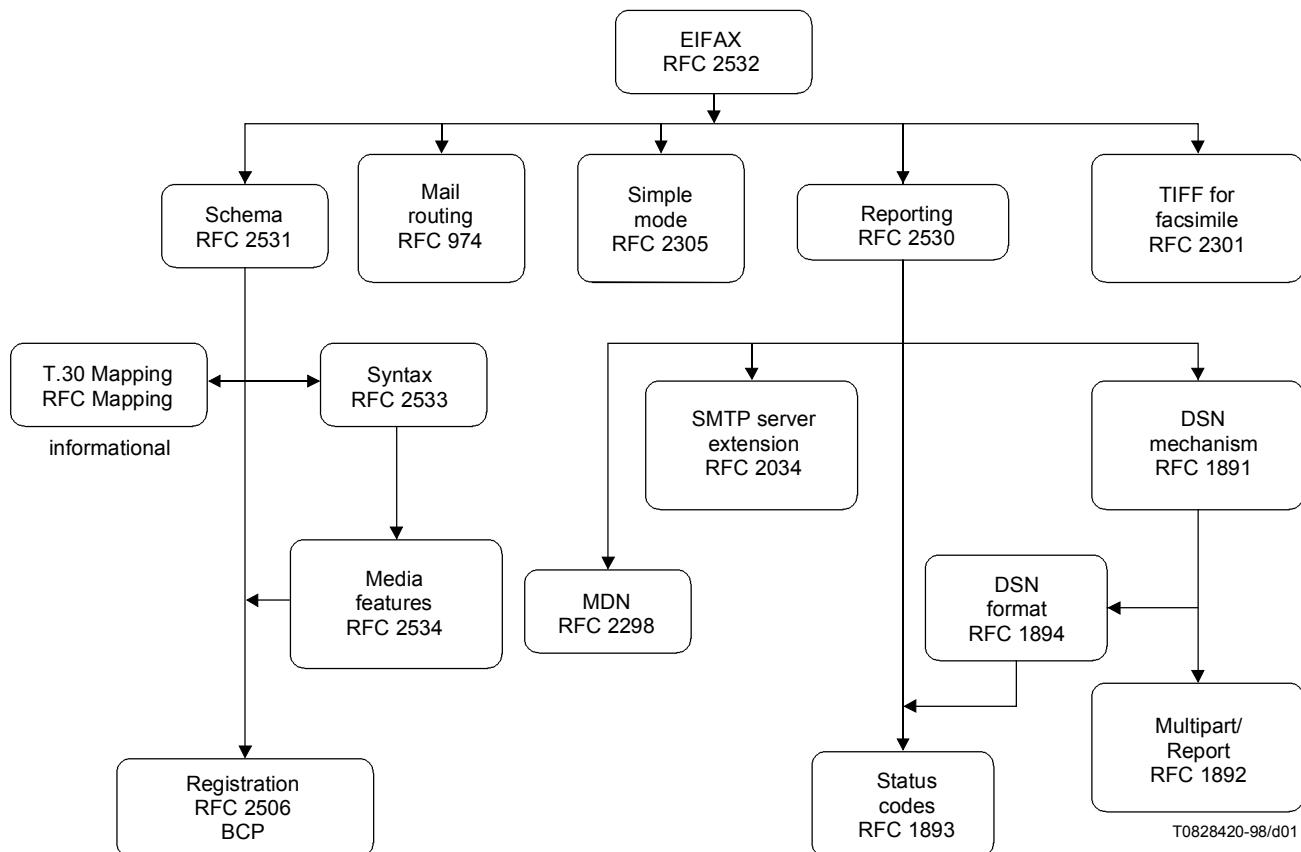
5) Nuevo Apéndice IV

Añádase un nuevo apéndice IV:

Apéndice IV

Ejemplos de codificación de TIFF-FX (RFC 2301) para perfiles distintos del perfil S

El presente apéndice contiene ejemplos de datos de codificación de imagen para perfiles distintos del perfil S. Corresponde a los perfiles F, J, C, L y M de TIFF-FX (RFC 2301). Se da únicamente a efectos de información.

Puede accederse a los ficheros reales utilizados para generar los ejemplos de codificación indicados, en unión de los casos de prueba asociados y otra información de TIFF-FX, la URL siguiente:

http://www.itu.int/ ITU-T/tiff-fx/index.html

Content of TIFF-FX coding examples   **Page**

IV.1 Profile F coding examples

IV.1.1 T.4 one-dimensional (MH) compression

A4 page at 204×196 pels/25.4 mm, MH with non-byte aligned EOLs, single-strip image, FillOrder is MSB, 0 is white, based on test case Profile F F5

Table IV.1-1/T.37 – Coding example of TIFF header, IFD and image data

Header				File Length 166470 bytes	
Offset	**Description**			**Comments**	**Coding**
0000	Octet order			Big endian order	4D 4D
0002	File identifier			42, TIFF file	00 2A
0004	1st IFD offset			Offset of IFD 0	00 00 00 08

IFD0 Offset 8 (0x8H) NextIFDOffset 62140 (0xf2bcH)						
Offset	**Description**	**Tag code**	**Type**	**Minimum capabilities**	**Comments**	**Coding sample**
0008	Number of Directory Entries	–	–	–	20 entries	00 14
000A	NewSubfileType	254	Long	2, Bit1=1	single page of a multi-page	00 FE 00 04 00 00 00 01 00 00 00 02
0016	ImageWidth	256	Long	1728	A4	01 00 00 04 00 00 00 01 00 00 06 C0
0022	ImageLength	257	Long	n/a	2339 lines	01 01 00 04 00 00 00 01 00 00 09 23
002E	BitsPerSample	258	Short	1	1 bit/sample	01 02 00 03 00 00 00 01 00 01 00 00
003A	Compression	259	Short	3	T.4 MH or MR	01 03 00 03 00 00 00 01 00 03 00 00
0046	Photometric Interpretation	262	Short	0	0 is white	01 06 00 03 00 00 00 01 00 00 00 00
0052	FillOrder	266	Short	2	MSB first	01 0A 00 03 00 00 00 01 00 01 00 00
005E	DocumentName	269	ASCII	n/a	Test case D05F	01 0D 00 02 00 00 00 0F 00 00 00 FE
006A	ImageDescription	270	ASCII	n/a	Page 1: French text Page 2: kanji	01 0E 00 02 00 00 00 22 00 00 01 0E
0076	StripOffsets	273	Long	n/a	444 bytes	01 11 00 04 00 00 00 01 00 00 01 BC
0082	SamplesPerPixel	277	Short	1	1 sample/pixel	01 15 00 03 00 00 00 01 00 01 00 00
008E	RowsPerStrip	278	Long	=ImageLength	2339 rows	01 16 00 04 00 00 00 01 00 00 09 23
009A	StripByteCounts	279	Long	n/a	61694 bytes	01 17 00 04 00 00 00 01 00 00 F0 FE
00A6	Xresolution	282	Rational	204, 200	204 pixels/inch	01 1A 00 05 00 00 00 01 00 00 01 32
00B2	Yresolution	283	Rational	200,196,100, 98	196 pixels/inch	01 1B 00 05 00 00 00 01 00 00 01 3A
00BE	T4Option	292	Long	0	1-dimensional MH, byte aligned	01 24 00 04 00 00 00 01 00 00 00 04
00CA	ResolutionUnit	296	Short	2	inch	01 28 00 03 00 00 00 01 00 02 00 00
00D6	PageNumber	297	Short	n/a	1 of 2	01 29 00 03 00 00 00 02 00 00 00 02
00E2	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	01 31 00 02 00 00 00 41 00 00 01 42
00EE	GlobalParameters IFD	400	Long	n/a	Offset 390	01 90 00 04 00 00 00 01 00 00 01 86
						Next IFD offset 00 00 F2 BC

IFD 0 Values longer than 4 bytes		
Offset	**Description**	**Comments**	**Coding**

Offset	**Description**	**Comments**	**Coding**
00FE	DocumentName	Test Case D05F	54 65 73 74 20 63 61 73 65 20 44 30 35 46 00
00010E	ImageDescription	Page 1: French text	50 61 67 65 20 31 3A 20 46 72 65 6E 63 68 20 74
00011E		Page 2: Kanji	65 78 74 20 50 61 67 65 20 32 3A 20 6B 61 6E 6A
00012E			69 00
000132	Xresolution	204 pixels/inch	00 00 00 CC 00 00 00 01
00013A	Yresolution	196 pixels/inch	00 00 00 C4 00 00 00 01
000142	Software	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
000152			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
000162			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 30
000172			38 20 30 38 3A 35 38 3A 30 32 20 50 4D 20 39 39
000182			00

IFD 0 → GP IFD → Child IFD 0 Offset 390 (0x186H) NextIFDOffset 0 (0x0H)

Offset	**Description**	**Tag code**	**Type**	**Minimum capabilities**	**Comments**	**Coding sample**
000186	Number of Directory Entries	–	–	–	4 entries	00 04
000188	ProfileType	401	Long	1	1 (Group 3 fax)	01 91 00 04 00 00 00 01 00 00 00 01
000194	FaxProfile	402	Byte	1	2 (Extended black & white lossless, Profile F)	01 92 00 01 00 00 00 01 02 00 00 00
0001A0	CodingMethod	403	Long	2	2 (MH)	01 93 00 04 00 00 00 01 00 00 00 02
0001AC	VersionYear	404	Byte	n/a	1998	01 94 00 01 00 00 00 04 31 39 39 38
						Next IFD offset 00 00 00 00

Image data

Offset	**Description**	**Comments**
0001bcH - 00f2baH	IFD 0 Strip 0	Compressed data

IFD1 Offset 62140 (0xf2bcH) NextIFDOffset 0 (0x0H)

Offset	**Description**	**Tag code**	**Type**	**Minimum capabilities**	**Comments**	**Coding sample**
00F2BC	Number of Directory Entries	–	–	–	19 entries	00 13
00F2BE	NewSubfileType	254	Long	2, Bit1=1	single page of a multi-page	00 FE 00 04 00 00 00 01 00 00 00 02
00F2CA	ImageWidth	256	Long	1728	1728 (A4)	01 00 00 04 00 00 00 01 00 00 06 C0
00F2DA	ImageLength	257	Long	n/a	2339 lines	01 01 00 04 00 00 00 01 00 00 09 23
00F2E2	BitsPerSample	258	Short	1	1 bit/sample	01 02 00 03 00 00 00 01 00 01 00 00
00F2EE	Compression	259	Short	3	T.4 HM or MR	01 03 00 03 00 00 00 01 00 03 00 00
00F2FA	Photometric Interpretation	262	Short	0	0 is white	01 06 00 03 00 00 00 01 00 00 00 00

00F306	FillOrder	266	Short	2	MSB first	01 0A 00 03 00 00 00 01 00 01 00 00
00F312	DocumentName	269	ASCII	n/a	Test case D05F	01 0D 00 02 00 00 00 0F 00 00 F3 A6
00F31E	ImageDescription	270	ASCII	n/a	Page 1: French text Page 2: kanji	01 0E 00 02 00 00 00 22 00 00 F3 B6
00F32A	StripOffsets	273	Long	n/a	62510 bytes	01 11 00 04 00 00 00 01 00 00 F4 2E
00F336	SamplesPerPixel	277	Short	1	1 sample/pixel	01 15 00 03 00 00 00 01 00 01 00 00
00F342	RowsPerStrip	278	Long	=ImageLength	2339 rows	01 16 00 04 00 00 00 01 00 00 09 23
00F34E	StripByteCounts	279	Long	n/a	103958 bytes	01 17 00 04 00 00 00 01 00 01 96 16
00F35A	Xresolution	282	Rational	204, 200 pixels/inch	204 pixels/inch	01 1A 00 05 00 00 00 01 00 00 F3 DA
00F366	Yresolution	283	Rational	200,196,100, 98 pixels/inch	196 pixels/inch	01 1B 00 05 00 00 00 01 00 00 F3 E2
00F372	T4Option	292	Long	0, 4	1-dimensional MH, byte aligned	01 24 00 04 00 00 00 01 00 00 00 04
00F37E	ResolutionUnit	296	Short	2	inches	01 28 00 03 00 00 00 01 00 02 00 00
00F38A	PageNumber	297	Short	n/a	2 of 2	01 29 00 03 00 00 00 02 00 01 00 02
00F396	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	01 31 00 02 00 00 00 41 00 00 F3 EA
						Next IFD offset 00 00 00 00

IFD 1 Values longer than 4 bytes

Offset	Description	Comments	Coding
00F3A6	DocumentName	Test Case D05F	54 65 73 74 20 63 61 73 65 20 44 30 33 46 00
00F3B6	ImageDescription	Page 1: French text	50 61 67 65 20 31 3A 20 46 72 65 6E 63 68 20 74
00F3C6		Page 2: Kanji	65 78 74 20 50 61 67 65 20 32 3A 20 6B 61 6E 6A
00F3D6			69 00
00F3DA	Xresolution	204 pixels/inch	00 00 00 CC 00 00 00 01
00F3E2	Yresolution	196 pixels/inch	00 00 00 C4 00 00 00 01
00F3EA	Software	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
00F3FA			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
00F40A			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 30
00F41A			38 20 30 38 3A 35 38 3A 30 32 20 50 4D 20 39 39
00F42A			00

Image data

Offset	Description	Comments
00f42eH - 028a44H	IFD 0 Strip 0	Compressed data

IV.1.2 T.4 two-dimensional (MR) compression

A4 page at 80×154 pels/cm, MR with non-byte aligned EOLs, single strip image, FillOrder is MSB, 0 is black, with GP IFD, based on test case Profile F F6

Table IV.1-2/T.37 – Coding example of TIFF header, IFD and image data

Header				File Length 236002 bytes	
Offset	**Description**			**Comments**	**Coding**
0000	Octet order			Little endian order	49 49
0002	File identifier			42, TIFF file	2A 00
0004	1st IFD offset			Offset of IFD 0	08 00 00 00

IFD0 Offset 8 (0x8H) NextIFDOffset 81740 (0x13f4cH)						
Offset	**Description**	**Tag code**	**Type**	**Minimum capabilities**	**Comments**	**Coding sample**
0008	Number of Directory Entries	–	–	–	20 entries	14 00
000A	NewSubfileType	254	Long	2, Bit1=1	single page of a multi-page	FE 00 04 00 01 00 00 00 02 00 00 00
0016	ImageWidth	256	Long	1728	A4	00 01 04 00 01 00 00 00 C0 06 00 00
0022	ImageLength	257	Long	n/a	4677 lines	01 01 04 00 01 00 00 00 45 12 00 00
002E	BitsPerSample	258	Short	1	1 bit/sample	02 01 03 00 01 00 00 00 01 00 00 00
003A	Compression	259	Short	3	T.4 HM or MR	03 01 03 00 01 00 00 00 03 00 00 00
0046	Photometric Interpretation	262	Short	0	0 is black	06 01 03 00 01 00 00 00 01 00 00 00
0052	FillOrder	266	Short	2	MSB first	0A 01 03 00 01 00 00 00 01 00 00 00
005E	DocumentName	269	ASCII	n/a	Test case D06F	0D 01 02 00 0F 00 00 00 FE 00 00 00
006A	ImageDescription	270	ASCII	n/a	Page 1: French text Page 2: kanji	0E 01 02 00 22 00 00 00 0E 01 00 00
0076	StripOffsets	273	Long	n/a	444 bytes	11 01 04 00 01 00 00 00 BC 01 00 00
0082	SamplesPerPixel	277	Short	1	1 sample/pixel	15 01 03 00 01 00 00 00 01 00 00 00
008E	RowsPerStrip	278	Long	=ImageLength	4677 rows	16 01 04 00 01 00 00 00 45 12 00 00
009A	StripByteCounts	279	Long	n/a	81296 bytes	17 01 04 00 01 00 00 00 90 3D 01 00
00A6	Xresolution	282	Rational	204, 200	80 pixels/cm	1A 01 05 00 01 00 00 00 32 01 00 00
00B2	Yresolution	283	Rational	200,196,100, 98	154 pixels/cm	1B 01 05 00 01 00 00 00 3A 01 00 00
00BE	T4Option	292	Long	0,4	2-dimensional MR and not byte-aligned EOL	24 01 04 00 01 00 00 00 01 00 00 00
00CA	ResolutionUnit	296	Short	2	cm	28 01 03 00 01 00 00 00 03 00 00 00
00D6	PageNumber	297	Short	n/a	1 of 2	29 01 03 00 02 00 00 00 00 00 02 00
00E2	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	31 01 02 00 41 00 00 00 42 01 00 00
00EE	GlobalParameters IFD	400	Long	n/a	Offset 390	90 01 04 00 01 00 00 00 86 01 00 00
						Next IFD offset 4C 3F 01 00

IFD 0 Values longer than 4 bytes		
Offset	**Description**	**Comments**	**Coding**

Offset	**Description**	**Comments**	**Coding**
000FE	DocumentName	Test Case D06F	54 65 73 74 20 63 61 73 65 20 44 30 36 46 00
00010E	ImageDescription	Page 1: French text	50 61 67 65 20 31 3A 20 46 72 65 6E 63 68 20 74
00011E		Page 2: Kanji	65 78 74 20 50 61 67 65 20 32 3A 20 6B 61 6E 6A
00012E			69 00
000132	Xresolution	80 pixels/cm	50 00 00 00 01 00 00 00
00013A	Yresolution	154 pixels/cm	9A 00 00 00 01 00 00 00
000142	Software	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
000152			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
000162			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 32
000172			32 20 30 37 3A 30 32 3A 35 39 20 50 4D 20 39 39
000182			00

IFD 0 → GP IFD → Child IFD 0 Offset 390 (0x186H) NextIFDOffset 0 (0x0H)

Offset	**Description**	**Tag code**	**Type**	**Minimum capabilities**	**Comments**	**Coding sample**
000186	Number of Directory Entries	–	–	–	4 entries	04 00
000188	ProfileType	401	Long	1	1 (Group 3 fax)	91 01 04 00 01 00 00 00 01 00 00 00
000194	FaxProfile	402	Byte	1	2 (Extended black & white lossless, Profile F)	92 01 01 00 01 00 00 00 02 00 00 00
0001A0	CodingMethod	403	Long	2, MH	MR	93 01 04 00 01 00 00 00 04 00 00 00
0001AC	VersionYear	404	Byte	n/a	1998	94 01 01 00 04 00 00 00 31 39 39 38
						Next IFD offset 00 00 00 00

Image data

Offset	**Description**	**Comments**
0001bcH - 013f4cH	IFD 0 Strip 0	Compressed data

IFD1 Offset 81740 (0x13f4cH) NextIFDOffset 0 (0x0H)

Offset	**Description**	**Tag code**	**Type**	**Minimum capabilities**	**Comments**	**Coding sample**
013F4C	Number of Directory Entries	–	–	–	19 entries	13 00
013F4E	NewSubfileType	254	Long	2, Bit1=1	single page of a multi-page	FE 00 04 00 01 00 00 00 02 00 00 00
013F5A	ImageWidth	256	Long	1728	A4	00 01 04 00 01 00 00 00 C0 06 00 00
013F66	ImageLength	257	Long	n/a	4677 lines	01 01 04 00 01 00 00 00 45 12 00 00
013F72	BitsPerSample	258	Short	1	1 bit/sample	02 01 03 00 01 00 00 00 01 00 00 00
013F7E	Compression	259	Short	3	T.4 HM or MR	03 01 03 00 01 00 00 00 03 00 00 00
013F8A	Photometric Interpretation	262	Short	0	0 is black	06 01 03 00 01 00 00 00 01 00 00 00

013F96	FillOrder	266	Short	2	MSB first	0A 01 03 00 01 00 00 00 01 00 00 00
013FA2	DocumentName	269	ASCII	n/a	Test case D06F	0D 01 02 00 0F 00 00 00 36 40 01 00
013FAE	ImageDescription	270	ASCII	n/a	Page 1: French text Page 2: kanji	0E 01 02 00 22 00 00 00 46 40 01 00
013FBA	StripOffsets	273	Long	n/a	82110 bytes	11 01 04 00 01 00 00 00 BE 40 01 00
013FC6	SamplesPerPixel	277	Short	1	1 sample/pixel	15 01 03 00 01 00 00 00 01 00 00 00
013FD2	RowsPerStrip	278	Long	=ImageLength	4677 rows	16 01 04 00 01 00 00 00 45 12 00 00
013FDE	StripByteCounts	279	Long	n/a	153890 bytes	17 01 04 00 01 00 00 00 22 59 02 00
013FEA	Xresolution	282	Rational	204, 200 pixels/inch	80 pixels/cm	1A 01 05 00 01 00 00 00 6A 40 01 00
013FF6	Yresolution	283	Rational	200,196,100, 98 pixels/inch	154 pixels/cm	1B 01 05 00 01 00 00 00 72 40 01 00
014002	T4Option	292	Long	0, 4	2-dimensional MR and not byte-aligned EOL	24 01 04 00 01 00 00 00 01 00 00 00
01400E	ResolutionUnit	296	Short	2	cm	28 01 03 00 01 00 00 00 03 00 00 00
01401A	PageNumber	297	Short	n/a	2 of 2	29 01 03 00 02 00 00 00 01 00 02 00
014026	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	31 01 02 00 41 00 00 00 7A 40 01 00
						Next IFD offset 00 00 00 00

IFD 1 Values longer than 4 bytes

Offset	Description	Comments	Coding
014036	DocumentName	Test Case D06F	54 65 73 74 20 63 61 73 65 20 44 30 36 46 00
014046	ImageDescription	Page 1: French text	50 61 67 65 20 31 3A 20 46 72 65 6E 63 68 20 74
014056		Page 2: Kanji	65 78 74 20 50 61 67 65 20 32 3A 20 6B 61 6E 6A
014066			69 00
01406A	Xresolution	80 pixels/cm	50 00 00 00 01 00 00 00
014072	Yresolution	154 pixels/cm	9A 00 00 00 01 00 00 00
01407A	Software	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
01408A			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
01409A			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 32
0140AA			32 20 30 37 3A 30 32 3A 35 39 20 50 4D 20 39 39
0140BA			00

Image data

Offset	Description	Comments
000140beH - 000399e0H	IFD 1 Strip 0	Compressed data

IV.1.3   T.6 two dimensional (MMR) compression

A4 page at 400×400 pels/25.4 mm, MMR, multi-strip image, FillOrder is MSB, 0 is white and without GlobalParameters IFD, based on test case Profile F F3

Table IV.1-3/T.37 – Coding example of TIFF header, IFD and image data

Header				File Length 193324 bytes	
Offset	**Description**			**Comments**	**Coding**
0000	Octet order			Big endian order	4D 4D
0002	File identifier			42, TIFF file	00 2A
0004	1st IFD offset			Offset of IFD 0	00 00 00 08

IFD0 Offset 8 (0x8H) NextIFDOffset 61434 (0xeffaH)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
0008	Number of Directory Entries	–	–	–	19 entries	00 13
000A	NewSubfileType	254	Long	2, Bit1=1	single page of a multi-page	00 FE 00 04 00 00 00 01 00 00 00 02
0016	ImageWidth	256	Long	3456	A4	01 00 00 04 00 00 00 01 00 00 0D 80
0022	ImageLength	257	Long	n/a	4677 lines	01 01 00 04 00 00 00 01 00 00 12 45
002E	BitsPerSample	258	Short	1	1 bit/sample	01 02 00 03 00 00 00 01 00 01 00 00
003A	Compression	259	Short	3	T.6 MMR	01 03 00 03 00 00 00 01 00 04 00 00
0046	Photometric Interpretation	262	Short	0	0 is white	01 06 00 03 00 00 00 01 00 00 00 00
0052	FillOrder	266	Short	2	MSB first	01 0A 00 03 00 00 00 01 00 01 00 00
005E	DocumentName	269	ASCII	n/a	Test case D03F	01 0D 00 02 00 00 00 0F 00 00 00 F2
006A	ImageDescription	270	ASCII	n/a	Page 1: French text Page 2: kanji	01 0E 00 02 00 00 00 22 00 00 01 02
0076	StripOffsets	273	Long	n/a	458 690 8262 18314 34710 39266 46030 48586 56794 61370 bytes	01 11 00 04 00 00 00 0A 00 00 01 26
0082	SamplesPerPixel	277	Short	1	1 sample/pixel	01 15 00 03 00 00 00 01 00 01 00 00
008E	RowsPerStrip	278	Long	=ImageLength	500 rows	01 16 00 04 00 00 00 01 00 00 01 F4
009A	StripByteCounts	279	Long	n/a	232 7572 10051 16393 4555 6763 2556 8208 4576 62 bytes	01 17 00 04 00 00 00 0A 00 00 01 4E
00A6	Xresolution	282	Rational	204, 200	400 pixels/inch	01 1A 00 05 00 00 00 01 00 00 01 76
00B2	Yresolution	283	Rational	200,196,100, 98	400 pixels/inch	01 1B 00 05 00 00 00 01 00 00 01 7E
00BE	T6Option	293	Long	0	MMR (G4) compressed	01 25 00 04 00 00 00 01 00 00 00 00
00CA	ResolutionUnit	296	Short	2	inch	01 28 00 03 00 00 00 01 00 02 00 00
00D6	PageNumber	297	Short	n/a	1 of 2	01 29 00 03 00 00 00 02 00 00 00 02
00E2	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	01 31 00 02 00 00 00 41 00 00 01 86
						Next IFD offset 00 00 EF FA

IFD 0 Values longer than 4 bytes			
Offset	**Description**	**Comments**	**Coding**
00F2	DocumentName	Test Case D03F	54 65 73 74 20 63 61 73 65 20 44 30 33 46 00
000102	ImageDescription	Page 1: French text	50 61 67 65 20 31 3A 20 46 72 65 6E 63 68 20 74
000112		Page 2: Kanji	65 78 74 20 50 61 67 65 20 32 3A 20 6B 61 6E 6A
000122			69 00
000126	StripOffset	458 690 8262 18314 34710 39266 46030 48586 56794 61370 bytes	00 00 01 CA 00 00 02 B2 00 00 20 46 00 00 47 8A
000136			00 00 87 96 00 00 99 62 00 00 B3 CE 00 00 BD CA
000146			00 00 DD DA 00 00 EF BA
00014E	StipByteCounts	232 7572 10051 16393 4555 6763 2556 8208 4576 62 bytes	00 00 00 E8 00 00 1D 94 00 00 27 43 00 00 40 09
00015E			00 00 11 CB 00 00 1A 6B 00 00 09 FC 00 00 20 10
00016E			00 00 11 E0 00 00 00 3E
000176	Xresolution	400 pixels/inch	00 00 01 90 00 00 00 01
00017E	Yresolution	400 pixels/inch	00 00 01 90 00 00 00 01
000186	Software	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
000196			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
0001A6			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 30
0001B6			38 20 30 38 3A 35 38 3A 30 32 20 50 4D 20 39 39
0001C6			00

Image data

Offset	**Description**	**Comments**
0001caH - 0002b2H	IFD 0 Strip 0	Compressed data
0002b2H - 002046H	IFD 0 Strip 1	Compressed data
002046H - 004789H	IFD 0 Strip 2	Compressed data
00478aH - 008793H	IFD 0 Strip 3	Compressed data
008796H - 009961H	IFD 0 Strip 4	Compressed data
009962H - 00b3cdH	IFD 0 Strip 5	Compressed data
00b3ceH - 00bdcaH	IFD 0 Strip 6	Compressed data
00bdcaH - 00dddaH	IFD 0 Strip 7	Compressed data
00dddaH - 00efbaH	IFD 0 Strip 8	Compressed data
00efbaH - 00eff8H	IFD 0 Strip 9	Compressed data

IFD1 Offset 61434 (0xeffaH) NextIFDOffset 0 (0x0H)

Offset	**Description**	**Tag code**	**Type**	**Minimum capabilities**	**Comments**	**Coding sample**
00EFFA	Number of Directory Entries	–	–	–	19 entries	00 13

Offset	Description				Value	Comments	Coding
00EFFC	NewSubfileType	254	Long		2, Bit1=1	single page of a multi-page	00 FE 00 04 00 00 00 01 00 00 00 02
00F008	ImageWidth	256	Long		1728	3456 (A4)	01 00 00 04 00 00 00 01 00 00 0D 80
00F014	ImageLength	257	Long		n/a	4677 lines	01 01 00 04 00 00 00 01 00 00 12 45
00F020	BitsPerSample	258	Short		1	1 bit/sample	01 02 00 03 00 00 00 01 00 01 00 00
00F02C	Compression	259	Short		3	T.6 MMR	01 03 00 03 00 00 00 01 00 04 00 00
00F038	Photometric Interpretation	262	Short		0	0 is white	01 06 00 03 00 00 00 01 00 00 00 00
00F044	FillOrder	266	Short		2	MSB first	01 0A 00 03 00 00 00 01 00 01 00 00
00F050	DocumentName	269	ASCII		n/a	Test case D03F	01 0D 00 02 00 00 00 0F 00 00 F0 E4
00F05C	ImageDescription	270	ASCII		n/a	Page 1: French text Page 2: kanji	01 0E 00 02 00 00 00 22 00 00 F0 F4
00F068	StripOffsets	273	Long		n/a	61884 65460 82600 99624 115020 125960 146916 166016 182812 193276 bytes	01 11 00 04 00 00 00 0A 00 00 F1 18
00F074	SamplesPerPixel	277	Short		1	1 sample/pixel	01 15 00 03 00 00 00 01 00 01 00 00
00F080	RowsPerStrip	278	Long		=ImageLength	500 rows	01 16 00 04 00 00 00 01 00 00 01 F4
00F08C	StripByteCounts	279	Long		n/a	3575 17137 17024 15394 10938 20955 19099 16796 10461 48 bytes	01 17 00 04 00 00 00 0A 00 00 F1 40
00F098	Xresolution	282	Rational		204, 200 pixels/inch	400 pixels/inch	01 1A 00 05 00 00 00 01 00 00 F1 68
00F0A4	Yresolution	283	Rational		200,196,100, 98 pixels/inch	400 pixels/inch	01 1B 00 05 00 00 00 01 00 00 F1 70
00F0B0	T6Option	292	Long		0, 4	MMR (G4) compressed	01 25 00 04 00 00 00 01 00 00 00 00
00F0BC	ResolutionUnit	296	Short		2	inches	01 28 00 03 00 00 00 01 00 02 00 00
00F0C8	PageNumber	297	Short		n/a	2 of 2	01 29 00 03 00 00 00 02 00 01 00 02
00F0D4	Software	305	ASCII		n/a	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	01 31 00 02 00 00 00 41 00 00 F1
							Next IFD offset 78 00 00 00 00

IFD 1 Values longer than 4 bytes

Offset	Description	Comments	Coding
00F0E4	DocumentName	Test Case D03F	54 65 73 74 20 63 61 73 65 20 44 30 33 46 00
00F0F4	ImageDescription	Page 1: French text	50 61 67 65 20 31 3A 20 46 72 65 6E 63 68 20 74
00F104		Page 2: Kanji	65 78 74 20 50 61 67 65 20 32 3A 20 6B 61 6E 6A
00F114			69 00
00F118	StripOffset	61884 65460 82600 99624 115020 125960 146916 166016 182812 193276 bytes	00 00 F1 BC 00 00 FF B4 00 01 42 A8 00 01 85 28
00F128			00 01 C1 4C 00 01 EC 08 00 02 3D E4 00 02 88 80
00F138			00 02 CA 1C 00 02 F2 FC

00F140	StipByteCounts	3575 17137 17024 15394 10938 20955 19099 16796 10461 48 bytes	00 00 0D F7 00 00 42 F1 00 00 42 80 00 00 3C 22
00F150			00 00 2A BA 00 00 51 DB 00 00 4A 9B 00 00 41 9C
00F160			00 00 28 DD 00 00 00 30
00F168	Xresolution	400 pixels/inch	00 00 01 90 00 00 00 01
00F170	Yresolution	400 pixels/inch	00 00 01 90 00 00 00 01
00F178	Software	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
00F188			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
00F198			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 30
00F1A8			38 20 30 38 3A 35 38 3A 30 32 20 50 4D 20 39 39
00F1B8			00

Image data

Offset	Description	Comments
00f1bcH - 00ffb3H	IFD 0 Strip 0	Compressed data
00ffb4H - 0142a5H	IFD 0 Strip 1	Compressed data
0142a8H - 018528H	IFD 0 Strip 2	Compressed data
⋮	⋮	⋮
02f2fcH - 02f32cH	IFD 0 Strip 9	Compressed data

IV.2 Profile J coding examples, T.85 (JBIG) compression

A4 page at 300 × 300 pels/25.4 mm, FillOrder is MSB, 0 is white, big endian byte order and without GlobalParameters IFD, based on test case Profile J J1

Table IV.2/T.37 – Coding example of TIFF header, IFD and image data

Header		File Length 115140 bytes		
Offset	**Description**		**Comments**	**Coding**
0000	Octet order		Big endian order	4D 4D
0002	File identifier		42, TIFF file	00 2A
0004	1st IFD offset		Offset of IFD 0	00 00 00 08

IFD0 Offset 8 (0x8H) NextIFDOffset 35298 (0x89e2H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
0008	Number of Directory Entries	–	–	–	18 entries	00 12
000A	NewSubfileType	254	Long	2, Bit1=1	single page of a multi-page	00 FE 00 04 00 00 00 01 00 00 00 02
0016	ImageWidth	256	Long	1728	2592, A4	01 00 00 04 00 00 00 01 00 00 0A 20
0022	ImageLength	257	Long	n/a	3508 lines	01 01 00 04 00 00 00 01 00 00 0D B4
002E	BitsPerSample	258	Short	1	1 bit/sample	01 02 00 03 00 00 00 01 00 01 00 00
003A	Compression	259	Short	9	9, JBIG T.85	01 03 00 03 00 00 00 01 00 09 00 00
0046	Photometric Interpretation	262	Short	0	0 is white	01 06 00 03 00 00 00 01 00 00 00 00
0052	FillOrder	266	Short	2	MSB first	01 0A 00 03 00 00 00 01 00 01 00 00
005E	DocumentName	269	ASCII	n/a	Test case D01J	01 0D 00 02 00 00 00 0F 00 00 00 E6
006A	ImageDescription	270	ASCII	n/a	Page 1: French text Page 2: kanji	01 0E 00 02 00 00 00 22 00 00 00 F6
0076	StripOffsets	273	Long	n/a	366 bytes	01 11 00 04 00 00 00 01 00 00 01 6E
0082	SamplesPerPixel	277	Short	1	1 sample/pixel	01 15 00 03 00 00 00 01 00 01 00 00
008E	RowsPerStrip	278	Long	=ImageLength	3508 rows	01 16 00 04 00 00 00 01 00 00 0D B4
009A	StripByteCounts	279	Long	n/a	34933 bytes	01 17 00 04 00 00 00 01 00 00 88 75
00A6	Xresolution	282	Rational	204, 200	300 pixels/inch	01 1A 00 05 00 00 00 01 00 00 01 1A
00B2	Yresolution	283	Rational	200,196,100, 98	300 pixels/inch	01 1B 00 05 00 00 00 01 00 00 01 22
00BE	ResolutionUnit	296	Short	2	inch	01 28 00 03 00 00 00 01 00 02 00 00
00CA	PageNumber	297	Short	n/a	1 of 2	01 29 00 03 00 00 00 02 00 00 00 02
00D6	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	01 31 00 02 00 00 00 41 00 00 01 2A
						Next IFD offset 00 00 89 E6

IFD 0 Values longer than 4 bytes

Offset	Description	Comments	Coding
0000E6	DocumentName	Test Case D01J	54 65 73 74 20 63 61 73 65 20 44 30 31 4A 00

0000F6	ImageDescription			Page 1: French text	50 61 67 65 20 31 3A 20 46 72 65 6E 63 68 20 74
000106				Page 2: Kanji	65 78 74 20 50 61 67 65 20 32 3A 20 6B 61 6E 6A
000116					69 00
00011A	Xresolution			300 pixels/inch	00 00 01 2C 00 00 00 01
000122	Yresolution			300 pixels/inch	00 00 01 2C 00 00 00 01
00012A	Software			Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
00013A					66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
00014A					74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 30
00015A					38 20 30 38 3A 35 38 3A 30 32 20 50 4D 20 39 39
00016A					00

Image data

Offset	Description	Comments
00016eH - 0089e3H	IFD 0 Strip 0	Compressed data

IFD1 Offset 35302 (0x89e6H) NextIFDOffset 0 (0x0H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
0089E6	Number of Directory Entries	–	–	–	18 entries	00 12
0089E8	NewSubfileType	254	Long	2, Bit1=1	single page of a multi-page	00 FE 00 04 00 00 00 01 00 00 00 02
0089F4	ImageWidth	256	Long	1728	2592, A4	01 00 00 04 00 00 00 01 00 00 0A 20
008a00	ImageLength	257	Long	n/a	3508 lines	01 01 00 04 00 00 00 01 00 00 0D B4
008A0C	BitsPerSample	258	Short	1	1 bit/sample	01 02 00 03 00 00 00 01 00 01 00 00
008A18	Compression	259	Short	9	9, JBIG T.85	01 03 00 03 00 00 00 01 00 09 00 00
008A24	Photometric Interpretation	262	Short	0	0 is white	01 06 00 03 00 00 00 01 00 00 00 00
008A30	FillOrder	266	Short	2	MSB first	01 0A 00 03 00 00 00 01 00 01 00 00
008A3C	DocumentName	269	ASCII	n/a	Test case D01J	01 0D 00 02 00 00 00 0F 00 00 8A C4
008A48	ImageDescription	270	ASCII	n/a	Page 1: French text Page 2: kanji	01 0E 00 02 00 00 00 22 00 00 8A D4
008A54	StripOffsets	273	Long	n/a	35660 bytes	01 11 00 04 00 00 00 01 00 00 8B 4C
008A60	SamplesPerPixel	277	Short	1	1 sample/pixel	01 15 00 03 00 00 00 01 00 01 00 00
008A6C	RowsPerStrip	278	Long	=ImageLength	3508 rows	01 16 00 04 00 00 00 01 00 00 0D B4
008A78	StripByteCounts	279	Long	n/a	79480 bytes	01 17 00 04 00 00 00 01 00 01 36 78
008A84	Xresolution	282	Rational	204, 200	300 pixels/inch	01 1A 00 05 00 00 00 01 00 00 8A F8
008A90	Yresolution	283	Rational	200,196,100, 98	300 pixels/inch	01 1B 00 05 00 00 00 01 00 00 8B 00
008A9C	ResolutionUnit	296	Short	2	inch	01 28 00 03 00 00 00 01 00 02 00 00
008AA8	PageNumber	297	Short	n/a	2 of 2	01 29 00 03 00 00 00 02 00 01 00 02
008AB4	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	01 31 00 02 00 00 00 41 00 00 8B 08

							Next IFD offset 00 00 00 00

IFD 1 Values longer than 4 bytes

Offset	Description	Comments	Coding
008AC4	DocumentName	Test Case D01J	54 65 73 74 20 63 61 73 65 20 44 30 31 4A 00
008AD4	ImageDescription	Page 1: French text	50 61 67 65 20 31 3A 20 46 72 65 6E 63 68 20 74
008AE4		Page 2: Kanji	65 78 74 20 50 61 67 65 20 32 3A 20 6B 61 6E 6A
008AF4			69 00
008AF8	Xresolution	300 pixels/inch	00 00 01 2C 00 00 00 01
008B00	Yresolution	300 pixels/inch	00 00 01 2C 00 00 00 01
008B08	Software	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
008B18			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
008B28			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 30
008B38			38 20 30 38 3A 35 38 3A 30 32 20 50 4D 20 39 39
008B48			00

Image data

Offset	Description	Comments
008b4cH - 01c1c4H	IFD 1 Strip 0	Compressed data

IV.3 Profile C coding example, JPEG compression and T.4 Annex E (L*a*b*) encoding

A4 page at 200×200 pels/25.4 mm, 3 samples per pixel, 8 bits per sample, 4:1:1 subsampling, FillOrder is MSB, little endian byte order, based on test case Profile C C3

Table IV.3/T.37 – Coding example of TIFF header, IFD and image data

Header					File Length 885062 bytes
Offset	**Description**			**Comments**	**Coding**
0000	Octet order			Little endian order	49 49
0002	File identifier			42, TIFF file	2A 00
0004	1st IFD offset			Offset of IFD 0	08 00 00 00

IFD0 Offset 8 (0x8H) NextIFDOffset 508108 (0x7c0ccH)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
0008	Number of Directory Entries	–	–	–	20 entries	14 00
000A	NewSubfileType	254	Long	2, Bit1=1	single page of a multi-page	FE 00 04 00 01 00 00 00 02 00 00 00
0016	ImageWidth	256	Long	1728	A4	00 01 04 00 01 00 00 00 C0 06 00 00
0022	ImageLength	257	Long	n/a	2342 lines	01 01 04 00 01 00 00 00 26 09 00 00
002E	BitsPerSample	258	Short	1	8, 8, 8 bit/sample	02 01 03 00 03 00 00 00 B6 C1 07 00
003A	Compression	259	Short	7	JPEG	03 01 03 00 01 00 00 00 07 00 00 00
0046	Photometric Interpretation	262	Short	10	ITU L*a*b*	06 01 03 00 01 00 00 00 0A 00 00 00
0052	FillOrder	266	Short	2	MSB first	0A 01 03 00 01 00 00 00 01 00 00 00
005E	DocumentName	269	ASCII	n/a	Test case D03C	0D 01 02 00 0F 00 00 00 06 01 00 00
006A	ImageDescription	270	ASCII	n/a	Page 1: Color test chart Page2: Continuous tone fax test chart	0E 01 02 00 41 00 00 00 16 01 00 00
0076	StripOffsets	273	Long	n/a	484 bytes	11 01 04 00 01 00 00 00 E4 01 00 00
0082	SamplesPerPixel	277	Short	1	3 sample/pixel	15 01 03 00 01 00 00 00 03 00 00 00
008E	RowsPerStrip	278	Long	=ImageLength	2342 rows	16 01 04 00 01 00 00 00 26 09 00 00
009A	StripByteCounts	279	Long	n/a	507622 bytes	17 01 04 00 01 00 00 00 E6 BE 07 00
00A6	Xresolution	282	Rational	200	200 pixels/inch	1A 01 05 00 01 00 00 00 5A 01 00 00
00B2	Yresolution	283	Rational	200	200 pixels/inch	1B 01 05 00 01 00 00 00 62 01 00 00
00BE	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
00CA	PageNumber	297	Short	n/a	1 of 2	29 01 03 00 02 00 00 00 00 00 02 00
00D6	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	31 01 02 00 41 00 00 00 6A 01 00 00
00E2	GlobalParameters IFD	400	Long	n/a	Offset 430	90 01 04 00 01 00 00 00 AE 01 00 00
00EE	ChromaSubSampling	530	Short	4:1:1	4:1:1	12 02 03 00 02 00 00 00 02 00 02 00
						Next IFD offset CC C0 07 00

IFD 0 Values longer than 4 bytes			
Offset	**Description**	**Comments**	**Coding**
0000FE	BitsPerSample	8, 8, 8	08 00 08 00 08 00
000106	DocumentName	Test Case D03C	54 65 73 74 20 63 61 73 65 20 44 30 33 43 00
000116	ImageDescription	Page 1: Color test chart	50 61 67 65 20 31 3A 20 43 6F 6C 6F 72 20 74 65
000126		Page 2: Continuous tone fax test chart	73 74 20 63 68 61 72 74 20 20 50 61 67 65 20 32
000136			3A 20 43 6F 6E 74 69 6E 75 6F 75 73 20 74 6F 6E
000146			65 20 66 61 78 20 74 65 73 74 20 63 68 61 72 74
000156			00
00015A	Xresolution	200 pixels/inch	C8 00 00 00 01 00 00 00
000162	Yresolution	200 pixels/inch	C8 00 00 00 01 00 00 00
00016A	Software	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
00017A			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
00018A			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 30
00019A			38 20 30 38 3A 35 38 3A 30 32 20 50 4D 20 39 39
0001AA			00

IFD 0 → GP IFD → Child IFD 0 Offset 430 (0x1aeH) NextIFDOffset 0 (0x0H)

Offset	**Description**	**Tag code**	**Type**	**Minimum capabilities**	**Comments**	**Coding sample**
0001AE	Number of Directory Entries	–	–	–	4 entries	04 00
0001B0	ProfileType	401	Long	1	1 (Group 3 fax)	91 01 04 00 01 00 00 00 01 00 00 00
0001BC	FaxProfile	402	Byte	4	Lossy color and grayscale, Profile C	92 01 01 00 01 00 00 00 04 00 00 00
0001C8	CodingMethod	403	Long	32	T.81 (JPEG)	93 01 04 00 01 00 00 00 20 00 00 00
0001D4	VersionYear	404	Byte	n/a	1998	94 01 01 00 04 00 00 00 31 39 39 38
						Next IFD offset 00 00 00 00

Image data

Offset	**Description**	**Comments**
0001e4H - 07c0caH	IFD 0 Strip 0	Compressed data

IFD1 Offset 508108 (0x7c0ccH) NextIFDOffset 0 (0x0H)

Offset	**Description**	**Tag code**	**Type**	**Minimum capabilities**	**Comments**	**Coding sample**
07C0CC	Number of Directory Entries	–	–	–	19 entries	13 00
07C0CE	NewSubfileType	254	Long	2, Bit1=1	single page of a multi-page	FE 00 04 00 01 00 00 00 02 00 00 00
07C0DA	ImageWidth	256	Long	1728	A4	00 01 04 00 01 00 00 00 C0 06 00 00
07C0E6	ImageLength	257	Long	n/a	1949 lines	01 01 04 00 01 00 00 00 9D 07 00 00

Offset	Description		Type		Value	Comments	Coding
07C0F2	BitsPerSample	258	Short	1	8, 8, 8	bit/sample	02 01 03 00 03 00 00 00 BA C1 07 00
07C1FE	Compression	259	Short	7	JPEG	03 01 03 00 01 00 00 00 07 00 00 00
07C10A	Photometric Interpretation	262	Short	10	ITU L*a*b*	06 01 03 00 01 00 00 00 0A 00 00 00
07C116	FillOrder	266	Short	2	MSB first	0A 01 03 00 01 00 00 00 01 00 00 00
07C122	DocumentName	269	ASCII	n/a	Test case D03C	0D 01 02 00 0F 00 00 00 BE C1 07 00
07C12E	ImageDescription	270	ASCII	n/a	Page 1: Color test chart Page2: Continuous tone fax test chart	0E 01 02 00 41 00 00 00 CE C1 07 00
07C13A	StripOffsets	273	Long	n/a	508518 bytes	11 01 04 00 01 00 00 00 66 C2 07 00
07C146	SamplesPerPixel	277	Short	1	3 sample/pixel	15 01 03 00 01 00 00 00 03 00 00 00
07C152	RowsPerStrip	278	Long	=ImageLength	1949 rows	16 01 04 00 01 00 00 00 9D 07 00 00
07C15E	StripByteCounts	279	Long	n/a	376541 bytes	17 01 04 00 01 00 00 00 DD BE 05 00
07C16A	Xresolution	282	Rational	200	200 pixels/inch	1A 01 05 00 01 00 00 00 12 C2 07 00
07C176	Yresolution	283	Rational	200	200 pixels/inch	1B 01 05 00 01 00 00 00 1A C2 07 00
07C182	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
07C18E	PageNumber	297	Short	n/a	2 of 2	29 01 03 00 02 00 00 00 01 00 02 00
07C19A	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	31 01 02 00 41 00 00 00 22 C2 07 00
07C1A6	ChromaSubSampling	530	Short	4:1:1	4:1:1	12 02 03 00 02 00 00 00 02 00 02 00
						Next IFD offset 00 00 00 00

IFD 1 Values longer than 4 bytes

Offset	Description	Comments	Coding
07C1B6	BitsPerSample	8, 8, 8	08 00 08 00 08 00
07C1BE	DocumentName	Test Case D03C	54 65 73 74 20 63 61 73 65 20 44 30 33 43 00
07C1CE	ImageDescription	Page 1: Color test chart	50 61 67 65 20 31 3A 20 43 6F 6C 6F 72 20 74 65
07C1DE		Page 2: Continuous tone fax test chart	73 74 20 63 68 61 72 74 20 20 50 61 67 65 20 32
07C1EE			3A 20 43 6F 6E 74 69 6E 75 6F 75 73 20 74 6F 6E
07C1FE			65 20 66 61 78 20 74 65 73 74 20 63 68 61 72 74
07C20E			00
07C212	Xresolution	200 pixels/inch	C8 00 00 00 01 00 00 00
07C21A	Yresolution	200 pixels/inch	C8 00 00 00 01 00 00 00

07C222	Software	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
07C232			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
07C242			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 30
07C252			38 20 30 38 3A 35 38 3A 30 32 20 50 4D 20 39 39
07C262			00

Image data

Offset	Description	Comments
07c266H - 0d8143H	IFD 1 Strip 0	Compressed data

IV.4 Profile L coding examples, JBIG compression with T.43 color encoding

IV.4.1 One bit per sample CMYK encoding of color

A4 page at 400 × 400 pels/25.4 mm, 3 samples per pixel, FillOrder is MSB, big endian byte order, based on test case Profile L L2

Table IV.4-1/T.37 – Coding example of TIFF header, IFD and image data

Header					File Length 1583262 bytes	
Offset	**Description**				**Comments**	**Coding**
0000	Octet order				Big endian order	4D 4D
0002	File identifier				42, TIFF file	00 2A
0004	1st IFD offset				Offset of IFD 0	00 00 00 08

IFD0 Offset 8 (0x8H) NextIFDOffset 1053616 (0x1013b0H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
0008	Number of Directory Entries	–	–	–	19 entries	00 13
000A	NewSubfileType	254	Long	2, Bit1=1	single page of a multi-page	00 FE 00 04 00 00 00 01 00 00 00 02
0016	ImageWidth	256	Long	3456	A4	01 00 00 04 00 00 00 01 00 00 0D 80
0022	ImageLength	257	Long	n/a	4684 lines	01 01 00 04 00 00 00 01 00 00 12 4C
002E	BitsPerSample	258	Short	1	1, 1, 1 bit/sample	01 02 00 03 00 00 00 03 00 00 00 F2
003A	Compression	259	Short	10	T.43 JBIG color	01 03 00 03 00 00 00 01 00 0A 00 00
0046	Photometric Interpretation	262	Short	5	CMYK	01 06 00 03 00 00 00 01 00 05 00 00
0052	FillOrder	266	Short	2	MSB first	01 0A 00 03 00 00 00 01 00 01 00 00
005E	DocumentName	269	ASCII	n/a	Test case L2	01 0D 00 02 00 00 00 0D 00 00 00 FA
006A	ImageDescription	270	ASCII	n/a	Page 1: Color test chart Page2: Bar chart	01 0E 00 02 00 00 00 2C 00 00 01 0A
0076	StripOffsets	273	Long	n/a	448 bytes	01 11 00 04 00 00 00 01 00 00 01 C0
0082	SamplesPerPixel	277	Short	1	3 sample/pixel	01 15 00 03 00 00 00 01 00 03 00 00
008E	RowsPerStrip	278	Long	=ImageLength	4684 rows	01 16 00 04 00 00 00 01 00 00 12 4C
009A	StripByteCounts	279	Long	n/a	1053166 bytes	01 17 00 04 00 00 00 01 00 10 11 EE
00A6	Xresolution	282	Rational	200	400 pixels/inch	01 1A 00 05 00 00 00 01 00 00 01 36
00B2	Yresolution	283	Rational	200	400 pixels/inch	01 1B 00 05 00 00 00 01 00 00 01 3E
00BE	ResolutionUnit	296	Short	2	inch	01 28 00 03 00 00 00 01 00 02 00 00
00CA	PageNumber	297	Short	n/a	1 of 2	01 29 00 03 00 00 00 02 00 00 00 02
00D6	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	01 31 00 02 00 00 00 41 00 00 01 46
00E2	GlobalParameters IFD	400	Long	n/a		01 90 00 04 00 00 00 01 00 00 01 8A
						Next IFD offset 00 10 13 B0

IFD 0 Values longer than 4 bytes

Offset	Description	Comments	Coding
0000F2	BitsPerSample	1, 1, 1	00 01 00 01 00 01
0000FA	DocumentName	Test Case L2	54 65 73 74 20 63 61 73 65 20 4C 32 00
00010A	ImageDescription	Page 1: Color test chart	50 61 67 65 20 31 3A 20 43 6F 6C 6F 72 20 74 65
00011A		Page 2: Bar chart	73 74 20 63 68 61 72 74 20 20 50 61 67 65 20 32
00012A			3A 20 42 61 72 20 63 68 61 72 74 00
000136	Xresolution	400 pixels/inch	00 00 01 90 00 00 00 01
00013E	Yresolution	400 pixels/inch	00 00 01 90 00 00 00 01
000146	Software	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
000156			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
000166			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 30
000176			38 20 30 38 3A 35 38 3A 30 32 20 50 4D 20 39 39
000186			00

IFD 0 → GP IFD → Child IFD 0 Offset 394 (0x18aH) NextIFDOffset 0 (0x0H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
00018A	Number of Directory Entries	–	–	–	4 entries	00 04
00018C	ProfileType	401	Long	1	1 (Group 3 fax)	01 91 00 04 00 00 00 01 00 00 00 01
000198	FaxProfile	402	Byte	5	Lossless color and grayscale, Profile L	01 92 00 01 00 00 00 01 05 00 00 00
0001A4	CodingMethod	403	Long	64	T.82 (JBIG), using T.43	01 93 00 04 00 00 00 01 00 00 00 40
0001B0	VersionYear	404	Byte	n/a	1998	01 94 00 01 00 00 00 04 31 39 39 38
						Next IFD offset 00 00 00 00

Image data

Offset	Description	Comments
000001c0H - 001013aeH	IFD 0 Strip 0	Compressed data

IFD1 Offset 1053616 (0x1013b0H) NextIFDOffset 0 (0x0H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
001013B0	Number of Directory Entries	–	–	–	18 entries	00 12
001013B2	NewSubfileType	254	Long	2, Bit1=1	single page of a multi-page	00 FE 00 04 00 00 00 01 00 00 00 02
001013BE	ImageWidth	256	Long	3456	A4	01 00 00 04 00 00 00 01 00 00 0D 80
001013CA	ImageLength	257	Long	n/a	4472 lines	01 01 00 04 00 00 00 01 00 00 11 78
001013D6	BitsPerSample	258	Short	1	1, 1, 1 bit/sample	01 02 00 03 00 00 00 03 00 10 14 8E
001013E2	Compression	259	Short	10	T.43 JBIG color	01 03 00 03 00 00 00 01 00 0A 00 00

001013EE	Photometric Interpretation	262	Short	5	CMYK	01 06 00 03 00 00 00 01 00 05 00 00
001013FA	FillOrder	266	Short	2	MSB first	01 0A 00 03 00 00 00 01 00 01 00 00
00101406	DocumentName	269	ASCII	n/a	Test case L2	01 0D 00 02 00 00 00 0D 00 10 14 96
00101412	ImageDescription	270	ASCII	n/a	Page 1: Color test chart Page2: Bar chart	01 0E 00 02 00 00 00 2C 00 10 14 A6
0010141E	StripOffsets	273	Long	n/a	1053990 bytes	01 11 00 04 00 00 00 01 00 10 15 26
0010142A	SamplesPerPixel	277	Short	1	3 sample/pixel	01 15 00 03 00 00 00 01 00 03 00 00
00101436	RowsPerStrip	278	Long	=ImageLength	4472 rows	01 16 00 04 00 00 00 01 00 00 11 78
00101442	StripByteCounts	279	Long	n/a	529270 bytes	01 17 00 04 00 00 00 01 00 08 13 76
0010144E	Xresolution	282	Rational	200	400 pixels/inch	01 1A 00 05 00 00 00 01 00 10 14 D2
0010145A	Yresolution	283	Rational	200	400 pixels/inch	01 1B 00 05 00 00 00 01 00 10 14 DA
00101466	ResolutionUnit	296	Short	2	inch	01 28 00 03 00 00 00 01 00 02 00 00
00101472	PageNumber	297	Short	n/a	2 of 2	01 29 00 03 00 00 00 02 00 00 00 02
0010147E	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	01 31 00 02 00 00 00 41 00 10 14 E2
						Next IFD offset 00 00 00 00

IFD 1 Values longer than 4 bytes

Offset	Description	Comments	Coding
0010148E	BitsPerSample	1, 1, 1	00 01 00 01 00 01
00101496	DocumentName	Test Case L2	54 65 73 74 20 63 61 73 65 20 4C 32 00
001014A6	ImageDescription	Page 1: Color test chart	50 61 67 65 20 31 3A 20 43 6F 6C 6F 72 20 74 65
001014B6		Page 2: Bar chart	73 74 20 63 68 61 72 74 20 20 50 61 67 65 20 32
001014C6			3A 20 42 61 72 20 63 68 61 72 74 00
001014D2	Xresolution	400 pixels/inch	00 00 01 90 00 00 00 01
001014DA	Yresolution	400 pixels/inch	00 00 01 90 00 00 00 01
001014E2	Software	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
001014F2			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
00101502			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 30
00101512			38 20 30 38 3A 35 38 3A 30 32 20 50 4D 20 39 39
00101522			00

Image data

Offset	Description	Comments
00101526H - 0018289cH	IFD 1 Strip 0	Compressed data

IV.4.2 Eight bits per sample ITU L*a*b* palette color encoding

A4 page at 200 × 200 pels/25.4 mm, 3 samples per pixel, 4:1:1 subsampling, FillOrder is MSB, little endian byte order, based on test case Profile L L4. Note that the ColorMap tag (i.e. tag code 320), present in this sample, is no longer used and may be ignored.

Table IV.4-2/T.37 – Coding example of TIFF header, IFD and image data

Header				File Length 1207546 bytes	

Offset	Description			Comments	Coding
0000	Octet order			Little endian order	49 49
0002	File identifier			42, TIFF file	2A 00
0004	1st IFD offset			Offset of IFD 0	08 00 00 00

IFD0 Offset 8 (0x8H) NextIFDOffset 1166376 (0x11cc28H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
0008	Number of Directory Entries	–	–	–	21 entries	15 00
000A	NewSubfileType	254	Long	2, Bit1=1	single page of a multi-page	FE 00 04 00 01 00 00 00 02 00 00 00
0016	ImageWidth	256	Long	1728	A4	00 01 04 00 01 00 00 00 C0 06 00 00
0022	ImageLength	257	Long	n/a	2342 lines	01 01 04 00 01 00 00 00 26 09 00 00
002E	BitsPerSample	258	Short	1	8 bit/sample	02 01 03 00 01 00 00 00 08 00 00 00
003A	Compression	259	Short	10	T.43 JBIG color	03 01 03 00 01 00 00 00 0A 00 00 00
0046	Photometric Interpretation	262	Short	10	ITU L*a*b*	06 01 03 00 01 00 00 00 0A 00 00 00
0052	FillOrder	266	Short	2	MSB first	0A 01 03 00 01 00 00 00 01 00 00 00
005E	DocumentName	269	ASCII	n/a	Test case L4	0D 01 02 00 0D 00 00 00 0A 01 00 00
006A	ImageDescription	270	ASCII	n/a	Page 1: Color test chart Page2: Bar chart	0E 01 02 00 2C 00 00 00 1A 01 00 00
0076	StripOffsets	273	Long	n/a	2000 bytes	11 01 04 00 01 00 00 00 D0 07 00 00
0082	SamplesPerPixel	277	Short	1	1 sample/pixel	15 01 03 00 01 00 00 00 01 00 00 00
008E	RowsPerStrip	278	Long	=ImageLength	2342 rows	16 01 04 00 01 00 00 00 26 09 00 00
009A	StripByteCounts	279	Long	n/a	1164373 bytes	17 01 04 00 01 00 00 00 55 C4 11 00
00A6	Xresolution	282	Rational	200	200 pixels/inch	1A 01 05 00 01 00 00 00 46 01 00 00
00B2	Yresolution	283	Rational	200	200 pixels/inch	1B 01 05 00 01 00 00 00 4E 01 00 00
00BE	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
00CA	PageNumber	297	Short	n/a	1 of 2	29 01 03 00 02 00 00 00 00 00 02 00
00D6	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	31 01 02 00 41 00 00 00 56 01 00 00
00E2	ColorMap	320	Short	n/a	410 offset to ITU L*a*b* sample values	40 01 03 00 00 03 00 00 9A 01 00 00
00EE	Indexed	346	Short	n/a	1, palette color image	5A 01 03 00 01 00 00 00 01 00 00 00
00FA	GlobalParameters IFD	400	Long	n/a	offset 1946	90 01 04 00 01 00 00 00 9A 07 00 00
						Next IFD offset 28 CC 11 00

IFD 0 Values longer than 4 bytes			
Offset	**Description**	**Comments**	**Coding**
00010A	DocumentName	Test Case L4	54 65 73 74 20 63 61 73 65 20 4C 34 00
00011A	ImageDescription	Page 1: Color test chart	50 61 67 65 20 31 3A 20 43 6F 6C 6F 72 20 74 65
00012A		Page 2: Bar chart	73 74 20 63 68 61 72 74 20 20 50 61 67 65 20 32
00013A			3A 20 42 61 72 20 63 68 61 72 74 00
000146	Xresolution	200 pixels/inch	C8 00 00 00 01 00 00 00
00014E	Yresolution	200 pixels/inch	C8 00 00 00 01 00 00 00
000156	Software	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
000166			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
000176			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 30
000186			38 20 30 38 3A 35 38 3A 30 32 20 50 4D 20 39 39
000196			00
00019A	ColorMap		00 00 00 80 00 60 00 C5 00 A5 00 85 00 8E 00 2C
0001AA			00 9B 00 FD 00 7E 00 66 00 FC 00 7C 00 5F 00 FE
0001BA			00 80 00 60 00 20 00 81 00 3E 00 9F 00 63 00 25
:			:
:			:
00078A			00 76 00 52 00 AD 00 80 00 60 00 00 00 80 00 60

IFD 0 → GP IFD → Child IFD 0 Offset 1946 (0x79aH) NextIFDOffset 0 (0x0H)

Offset	**Description**	**Tag code**	**Type**	**Minimum capabilities**	**Comments**	**Coding sample**
00079A	Number of Directory Entries	–	–	–	4 entries	04 00
00079C	ProfileType	401	Long	1	1 (Group 3 fax)	91 01 04 00 01 00 00 00 01 00 00 00
0007A8	FaxProfile	402	Byte	5	Lossless color and grayscale, Profile L	92 01 01 00 01 00 00 00 05 00 00 00
0007B4	CodingMethod	403	Long	64	T.82 (JBIG), using T.43	93 01 04 00 01 00 00 00 40 00 00 00
0007C0	VersionYear	404	Byte	n/a	1998	94 01 01 00 04 00 00 00 31 39 39 38
						Next IFD offset 00 00 00 00

Image data

Offset	**Description**	**Comments**
0007d0H - 0011cc25H	IFD 0 Strip 0	Compressed data

IFD1	Offset 1166376 (0x11cc28H) NextIFDOffset 0 (0x0H)					
Offset	**Description**	**Tag code**	**Type**	**Minimum capabilities**	**Comments**	**Coding sample**
0011CC28	Number of Directory Entries	–	–	–	20 entries	14 00
0011CC2A	NewSubfileType	254	Long	2, Bit1=1	single page of a multi-page	FE 00 04 00 01 00 00 00 02 00 00 00
0011CC36	ImageWidth	256	Long	1728	A4	00 01 04 00 01 00 00 00 C0 06 00 00
0011CC42	ImageLength	257	Long	n/a	2236 lines	01 01 04 00 01 00 00 00 BC 08 00 00
0011CC4E	BitsPerSample	258	Short	1	8 bit/sample	02 01 03 00 01 00 00 00 08 00 00 00
0011CC5A	Compression	259	Short	10	T.43 JBIG color	03 01 03 00 01 00 00 00 0A 00 00 00
0011CC66	Photometric Interpretation	262	Short	10	ITU L*a*b*	06 01 03 00 01 00 00 00 0A 00 00 00
0011CC72	FillOrder	266	Short	2	MSB first	0A 01 03 00 01 00 00 00 01 00 00 00
0011CC7E	DocumentName	269	ASCII	n/a	Test case L4	0D 01 02 00 0D 00 00 00 1E CD 11 00
0011CC8A	ImageDescription	270	ASCII	n/a	Page 1: Color test chart Page2: Bar chart	0E 01 02 00 2C 00 00 00 2E CD 11 00
0011CC96	StripOffsets	273	Long	n/a	1168302 bytes	11 01 04 00 01 00 00 00 AE D3 11 00
0011CCA2	SamplesPerPixel	277	Short	1	1 sample/pixel	15 01 03 00 01 00 00 00 01 00 00 00
0011CCAE	RowsPerStrip	278	Long	=ImageLength	2236 rows	16 01 04 00 01 00 00 00 BC 08 00 00
0011CCBA	StripByteCounts	279	Long	n/a	39242 bytes	17 01 04 00 01 00 00 00 4A 99 00 00
0011CCC6	Xresolution	282	Rational	200	200 pixels/inch	1A 01 05 00 01 00 00 00 5A CD 11 00
0011CCD2	Yresolution	283	Rational	200	200 pixels/inch	1B 01 05 00 01 00 00 00 62 CD 11 00
0011CCDE	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
0011CCEA	PageNumber	297	Short	n/a	2 of 2	29 01 03 00 02 00 00 00 01 00 02 00
0011CCF6	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	31 01 02 00 41 00 00 00 6A CD 11 00
0011CD02	ColorMap	320	Short	n/a	1166766 offset to ITU L*a*b* sample values	40 01 03 00 00 03 00 00 AE CD 11 00
0011CD0E	Indexed	346	Short	n/a	1, palette color image	5A 01 03 00 01 00 00 00 01 00 00 00
						Next IFD offset 00 00 00 00

IFD 1 Values longer than 4 bytes

Offset	Description	Comments	Coding
0011CD1E	DocumentName	Test Case L4	54 65 73 74 20 63 61 73 65 20 4C 34 00
0011CD2E	ImageDescription	Page 1: Color test chart	50 61 67 65 20 31 3A 20 43 6F 6C 6F 72 20 74 65
0011CD3E		Page 2: Bar chart	73 74 20 63 68 61 72 74 20 20 50 61 67 65 20 32
0011CD4E			3A 20 42 61 72 20 63 68 61 72 74 00
0011CD5A	Xresolution	200 pixels/inch	C8 00 00 00 01 00 00 00
0011CD62	Yresolution	200 pixels/inch	C8 00 00 00 01 00 00 00

0011CD6A	Software	Xerox TIFF-FX Reference Implementation Mon Feb 08 08:58:02 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
0011CD7A			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
0011CD8A			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 30
0011CD9A			38 20 30 38 3A 35 38 3A 30 32 20 50 4D 20 39 39
0011CDAA			00
0011CDAE	ColorMap		00 00 00 80 00 60 00 92 00 F3 00 B4 00 F8 00 6A
0011CDBE			00 CF 00 FE 00 80 00 60 00 9D 00 80 00 60 00 C2
			00 80 00 60 00 BD 00 80 00 60 00 DB 00 06 00 BE
0011CDCE			:
			:
0011D39E			00 80 00 60 00 00 00 80 00 60 00 2C 00 B5 00 81

Image data		
Offset	**Description**	**Comments**
0011d3aeH - 00126cf8H	IFD 1 Strip 0	Compressed data

IV.5　Profile M coding examples

IV.5.1　Three layers & single strip per layer: Mask with T.6 (MMR) compression, Background and Foreground with JPEG compression and T.4 Annex E ITU L*a*b* color encoding

3-layer (BG/M/FG), 100/400/200 resolution, JPEG/MMR/JPEG compression, ChromaSubsampling BG=1:1:1 while FG=4:1:1, single strip image, FG default not black, MSB FillOrder, little-endian, based on test case Profile M M2

Table IV.5-1/T.37 – Coding example of TIFF header, IFD and image data

Header		File Length 374882 bytes		
Offset	**Description**		**Comments**	**Coding**
0000	Octet order		Little endian order	49 49
0002	File identifier		42, TIFF file	2A 00
0004	1st IFD offset		Offset of IFD 0	08 00 00 00

IFD0　(Mask)　Offset 8 (0x8H) NextIFDOffset 196772 (0x300a4H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
0008	Number of Directory Entries	–	–	–	24 entries	18 00
000A	NewSubfileType	254	Long	18	primary IFD of a single page of a multi-page	FE 00 04 00 01 00 00 00 12 00 00 00
0016	ImageWidth	256	Long	3456	A4	00 01 04 00 01 00 00 00 80 0D 00 00
0022	ImageLength	257	Long	n/a	4400 lines	01 01 04 00 01 00 00 00 30 11 00 00
002E	BitsPerSample	258	Short	1	1 bit/sample	02 01 03 00 03 00 00 00 01 00 00 00
003A	Compression	259	Short	4	4, T.6 MMR	03 01 03 00 01 00 00 00 04 00 00 00
0046	Photometric Interpretation	262	Short	0	0 is white	06 01 03 00 01 00 00 00 00 00 00 00
0052	FillOrder	266	Short	2	MSB first	0A 01 03 00 01 00 00 00 01 00 00 00
005E	DocumentName	269	ASCII	n/a	Test case M02	0D 01 02 00 0E 00 00 00 2E 01 00 00
006A	ImageDescription	270	ASCII	n/a	TIFF-FX Profile M Test Sources	0E 01 02 00 1F 00 00 00 3E 01 00 00
0076	StripOffsets	273	Long	n/a	1400 bytes	11 01 04 00 01 00 00 00 78 05 00 00
0082	SamplesPerPixel	277	Short	1	1 sample/pixel	15 01 03 00 01 00 00 00 01 00 00 00
008E	RowsPerStrip	278	Long	=ImageLength	4400 rows	16 01 04 00 01 00 00 00 30 11 00 00
009A	StripByteCounts	279	Long	n/a	36943 bytes	17 01 04 00 01 00 00 00 4F 90 00 00
00A6	Xresolution	282	Rational	200	400 pixels/inch	1A 01 05 00 01 00 00 00 5E 01 00 00
00B2	Yresolution	283	Rational	200	400 pixels/inch	1B 01 05 00 01 00 00 00 66 01 00 00
00BE	XPosition	286	Rational	n/a	0 X-offset	1E 01 05 00 01 00 00 00 6E 01 00 00
00CA	YPosition	287	Rational	n/a	0 Y-offset	1F 01 05 00 01 00 00 00 76 01 00 00
00D6	T6Option	293	Long	0	MMR (G4) compressed	25 01 04 00 01 00 00 00 00 00 00 00
00E2	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
00EE	PageNumber	297	Short	n/a	1 of 2	29 01 03 00 02 00 00 00 00 00 02 00
00FA	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	31 01 02 00 41 00 00 00 7E 01 00 00

0106	SubIFDs	330	Long	n/a	Offsets of 466 and 900	4A 01 04 00 02 00 00 00 C2 01 00 00
0112	GlobalParameters IFD	400	Long	n/a	1334 offset	90 01 04 00 01 00 00 00 36 05 00 00
011E	ImageLayer	34732	Long	2, 1	2 (mask), 1 (first image to be imaged)	AC 87 04 00 02 00 00 00 CA 01 00 00
						Next IFD offset A4 00 03 00

IFD 0 (Mask) Values longer than 4 bytes

Offset	Description	Comments	Coding
00012E	DocumentName	Test case M02	54 65 73 74 20 43 61 73 65 20 4D 30 32 00
00013E	ImageDescription	TIFF-FX Profile M Test Sources	54 49 46 46 2D 46 58 20 50 72 6F 66 69 6C 65 20
00014E			4D 20 54 65 73 74 20 53 6F 75 72 63 65 73 00
00015E	Xresolution	400 pixels/inch	90 01 00 00 01 00 00 00
000166	Yresolution	400 pixels/inch	90 01 00 00 01 00 00 00
00016E	XPosition	0 offset	00 00 00 00 90 01 00 00
000176	YPosition	0 offset	00 00 00 00 90 01 00 00
00017E	Software	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
00018E			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
00019E			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 32
0001AE			32 20 30 37 3A 30 32 3A 35 39 20 50 4D 20 39 39
0001BE			00
0001C2	SubIFDs	Offsets of 466 and 900	D2 01 00 00 84 03 00 00
0001CA	ImageLayer	2 (mask), 1 (first image to be imaged)	02 00 00 00 01 00 00 00

IFD 0 → SubIFD 0 → Child IFD 0 (Bkgnd) Offset 466 (0x1d2H) NextIFDOffset 0 (0x0H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
0001D2	Number of Directory Entries	–	–	–	22 entries	16 00
0001D4	NewSubfileType	254	Long	16	Child IFD (background) of a single page of a multi-page	FE 00 04 00 01 00 00 00 10 00 00 00
0001E0	ImageWidth	256	Long	864	A4	00 01 04 00 01 00 00 00 60 03 00 00
0001EC	ImageLength	257	Long	n/a	1100 lines	01 01 04 00 01 00 00 00 4C 04 00 00
0001F8	BitsPerSample	258	Short	1	8, 8, 8 bit/sample	02 01 03 00 03 00 00 00 E0 02 00 00
000204	Compression	259	Short	7	JPEG	03 01 03 00 01 00 00 00 07 00 00 00
000210	Photometric Interpretation	262	Short	10	ITU L*a*b*	06 01 03 00 01 00 00 00 0A 00 00 00
00021C	FillOrder	266	Short	2	MSB first	0A 01 03 00 01 00 00 00 01 00 00 00
000228	DocumentName	269	ASCII	n/a	Test case M02	0D 01 02 00 0E 00 00 00 E8 02 00 00

000234	ImageDescription	270	ASCII	n/a	TIFF-FX Profile M Test Sources	0E 01 02 00 1F 00 00 00 F8 02 00 00
000240	StripOffsets	273	Long	n/a	38344 bytes	11 01 04 00 01 00 00 00 C8 95 00 00
00024C	SamplesPerPixel	277	Short	1	3 sample/pixel	15 01 03 00 01 00 00 00 03 00 00 00
000258	RowsPerStrip	278	Long	=ImageLength	1100 rows	16 01 04 00 01 00 00 00 4C 04 00 00
000264	StripByteCounts	279	Long	n/a	42833 bytes	17 01 04 00 01 00 00 00 51 A7 00 00
000270	Xresolution	282	Rational	200	100 pixels/inch	1A 01 05 00 01 00 00 00 18 03 00 00
00027C	Yresolution	283	Rational	200	100 pixels/inch	1B 01 05 00 01 00 00 00 20 03 00 00
000288	XPosition	286	Rational	n/a	0 X-offset	1E 01 05 00 01 00 00 00 28 03 00 00
000294	YPosition	287	Rational	n/a	0 Y-offset	1F 01 05 00 01 00 00 00 30 03 00 00
0002A0	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
0002AC	PageNumber	297	Short	n/a	1 of 2	29 01 03 00 02 00 00 00 00 00 02 00
0002B8	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	31 01 02 00 41 00 00 00 38 03 00 00
0002C4	ChromaSubSampling	530	Short	4:1:1	1:1:1	12 02 03 00 02 00 00 00 01 00 01 00
0002D0	ImageLayer	34732	Long	1, 1	1 (background), 1 (first image to be imaged)	AC 87 04 00 02 00 00 00 7C 03 00 00
						Next IFD offset 00 00 00 00

IFD 0 → SubIFD 0 → Child IFD 0 (Bkgnd) Values longer than 4 bytes

Offset	Description	Comments	Coding
0002E0	BitsPerSample	8, 8, 8	08 00 08 00 08 00
0002E8	DocumentName	Test Case M02	54 65 73 74 20 43 61 73 65 20 4D 30 32 00
0002F8	ImageDescription	TIFF-FX Profile M Test Sources	54 49 46 46 2D 46 58 20 50 72 6F 66 69 6C 65 20
000308			4D 20 54 65 73 74 20 53 6F 75 72 63 65 73 00
000318	Xresolution	100 pixels/inch	64 00 00 00 01 00 00 00
000320	Yresolution	100 pixels/inch	64 00 00 00 01 00 00 00
000328	XPosition	0 offset	00 00 00 00 90 01 00 00
000330	YPosition	0 offset	00 00 00 00 90 01 00 00
000338	Software	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
000348			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
000358			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 32
000368			32 20 30 37 3A 30 32 3A 35 39 20 50 4D 20 39 39
000378			00
00037C	ImageLayer	1 (background), 1 (first image to be imaged)	01 00 00 00 01 00 00 00

IFD 0 → SubIFD 1 → Child IFD 0 (Frgnd) Offset 900 (0x384H) NextIFDOffset 0 (0x0H)						
Offset	**Description**	**Tag code**	**Type**	**Minimum capabilities**	**Comments**	**Coding sample**
000384	Number of Directory Entries	–	–	–	22 entries	16 00
000386	NewSubfileType	254	Long	16	Child IFD (foreground) of a single page of a multi-page	FE 00 04 00 01 00 00 00 10 00 00 00
000392	ImageWidth	256	Long	1728	A4	00 01 04 00 01 00 00 00 C0 06 00 00
00039E	ImageLength	257	Long	n/a	2200 lines	01 01 04 00 01 00 00 00 98 08 00 00
0003AA	BitsPerSample	258	Short	1	8, 8, 8 bit/sample	02 01 03 00 03 00 00 00 92 04 00 00
0003B6	Compression	259	Short	7	JPEG	03 01 03 00 01 00 00 00 07 00 00 00
0003C2	Photometric Interpretation	262	Short	10	ITU L*a*b*	06 01 03 00 01 00 00 00 0A 00 00 00
0003CE	FillOrder	266	Short	2	MSB first	0A 01 03 00 01 00 00 00 01 00 00 00
0003DA	DocumentName	269	ASCII	n/a	Test case M02	0D 01 02 00 0E 00 00 00 9A 04 00 00
0003E6	ImageDescription	270	ASCII	n/a	TIFF-FX Profile M Test Sources	0E 01 02 00 1F 00 00 00 AA 04 00 00
0003F2	StripOffsets	273	Long	n/a	81180 bytes	11 01 04 00 01 00 00 00 1C 3D 01 00
0003FE	SamplesPerPixel	277	Short	1	3 sample/pixel	15 01 03 00 01 00 00 00 03 00 00 00
00040A	RowsPerStrip	278	Long	=ImageLength	2200 rows	16 01 04 00 01 00 00 00 98 08 00 00
000416	StripByteCounts	279	Long	n/a	115591 bytes	17 01 04 00 01 00 00 00 87 C3 01 00
000422	Xresolution	282	Rational	200	200 pixels/inch	1A 01 05 00 01 00 00 00 CA 04 00 00
00042E	Yresolution	283	Rational	200	200 pixels/inch	1B 01 05 00 01 00 00 00 D2 04 00 00
00043A	XPosition	286	Rational	n/a	0 X-offset	1E 01 05 00 01 00 00 00 DA 04 00 00
000446	YPosition	287	Rational	n/a	0 Y-offset	1F 01 05 00 01 00 00 00 E2 04 00 00
000452	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
00045E	PageNumber	297	Short	n/a	1 of 2	29 01 03 00 02 00 00 00 00 00 02 00
00046A	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	31 01 02 00 41 00 00 00 EA 04 00 00
000476	ChromaSubSampling	530	Short	4:1:1	4:1:1	12 02 03 00 02 00 00 00 02 00 02 00
000482	ImageLayer	34732	Long	3, 1	3 (foreground), 1 (first image to be imaged)	AC 87 04 00 02 00 00 00 2E 05 00 00
						Next IFD offset 00 00 00 00

IFD 0 → SubIFD 1 → Child IFD 0 (Frgnd) Values longer than 4 bytes			
Offset	**Description**	**Comments**	**Coding**
000492	BitsPerSample	8, 8, 8	08 00 08 00 08 00
00049A	DocumentName	Test Case M02	54 65 73 74 20 43 61 73 65 20 4D 30 32 00
0004AA	ImageDescription	TIFF-FX Profile M Test Sources	54 49 46 46 2D 46 58 20 50 72 6F 66 69 6C 65 20
0004BA			4D 20 54 65 73 74 20 53 6F 75 72 63 65 73 00
0004CA	Xresolution	200 pixels/inch	C8 00 00 00 01 00 00 00

Offset	Description				Coding sample
0004D2	Yresolution			200 pixels/inch	C8 00 00 00 01 00 00 00
0004DA	XPosition			0 offset	00 00 00 00 90 01 00 00
0004E2	YPosition			0 offset	00 00 00 00 90 01 00 00
0004EA	Software			Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
0004FA					66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
00050A					74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 32
00051A					32 20 30 37 3A 30 32 3A 35 39 20 50 4D 20 39 39
00052A					00
00052E	ImageLayer			1 (foreground), 1 (first image to be imaged)	03 00 00 00 01 00 00 00

IFD 0 → GP IFD → Child IFD 0 Offset 1334 (0x536H) NextIFDOffset 0 (0x0H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
000536	Number of Directory Entries	–	–	–	5 entries	05 00
000538	ProfileType	401	Long	1	1 (Group 3 fax)	91 01 04 00 01 00 00 00 01 00 00 00
000544	FaxProfile	402	Byte	6	Mixed Raster Content, Profile M	92 01 01 00 01 00 00 00 06 00 00 00
000550	CodingMethod	403	Long	2	40, T.6 (MMR) and T.81 (JPEG)	93 01 04 00 01 00 00 00 28 00 00 00
00055C	VersionYear	404	Byte	n/a	1999	94 01 01 00 04 00 00 00 31 39 39 39
000568	ModeNumber	405	Byte	1	1	95 01 01 00 01 00 00 00 00 00 00 00
						Next IFD offset 00 00 00 00

Image data

Offset	Description	Comments
000578H - 0095c7H	IFD 0 (Mask) Strip 0	Compressed data
0095c8H - 013d19H	IFD 0 (Bkgnd) Strip 0	Compressed data
013d1cH - 0300a3H	IFD 0 (Frgnd) Strip 0	Compressed data

IFD1 (Mask) Offset 196772 (0x300a4H) NextIFDOffset 0 (0x0H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
0300A4	Number of Directory Entries	–	–	–	23 entries	17 00
0300A6	NewSubfileType	254	Long	18	primary IFD of a single page of a multi-page	FE 00 04 00 01 00 00 00 12 00 00 00
0300B2	ImageWidth	256	Long	3456	A4	00 01 04 00 01 00 00 00 80 0D 00 00
0300BE	ImageLength	257	Long	n/a	4400 lines	01 01 04 00 01 00 00 00 30 11 00 00
0300CA	BitsPerSample	258	Short	1	1 bit/sample	02 01 03 00 01 00 00 00 01 00 00 00
0300D6	Compression	259	Short	4	4, T.6 MMR	03 01 03 00 01 00 00 00 04 00 00 00
0300E2	Photometric Interpretation	262	Short	0	0 is white	06 01 03 00 01 00 00 00 00 00 00 00
0300EE	FillOrder	266	Short	2	MSB first	0A 01 03 00 01 00 00 00 01 00 00 00
0300FA	DocumentName	269	ASCII	n/a	Test case M02	0D 01 02 00 0E 00 00 00 BE 01 03 00

Offset	Description		Type		Comments	Coding
030106	ImageDescription	270	ASCII	n/a	TIFF-FX Profile M Test Sources	0E 01 02 00 1F 00 00 00 CE 01 03 00
030112	StripOffsets	273	Long	n/a	198086 bytes	11 01 04 00 01 00 00 00 C6 05 03 00
03011E	SamplesPerPixel	277	Short	1	1 sample/pixel	15 01 03 00 01 00 00 00 01 00 00 00
03012A	RowsPerStrip	278	Long	=ImageLength	4400 rows	16 01 04 00 01 00 00 00 30 11 00 00
030136	StripByteCounts	279	Long	n/a	1678 bytes	17 01 04 00 01 00 00 00 8E 06 00 00
030142	Xresolution	282	Rational	200	400 pixels/inch	1A 01 05 00 01 00 00 00 EE 01 03 00
03014E	Yresolution	283	Rational	200	400 pixels/inch	1B 01 05 00 01 00 00 00 F6 01 03 00
03015A	XPosition	286	Rational	n/a	0 X-offset	1E 01 05 00 01 00 00 00 FE 01 03 00
030166	YPosition	287	Rational	n/a	0 Y-offset	1F 01 05 00 01 00 00 00 06 02 03 00
030172	T6Option	293	Long	0	MMR (G4) compressed	25 01 04 00 01 00 00 00 00 00 00 00
03017E	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
03018A	PageNumber	297	Short	n/a	2 of 2	29 01 03 00 02 00 00 00 01 00 02 00
030196	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	31 01 02 00 41 00 00 00 0E 02 03 00
0301A2	SubIFDs	330	Long	n/a	Offsets of 197218 and 197652	4A 01 04 00 02 00 00 00 52 02 03 00
0301AE	ImageLayer	34732	Long	2, 1	2 (mask), 1 (first image to be imaged)	AC 87 04 00 02 00 00 00 5A 02 03 00
						Next IFD offset 00 00 00 00

IFD 1 (Mask) Values longer than 4 bytes

Offset	Description	Comments	Coding
0301BE	DocumentName	Test case M02	54 65 73 74 20 43 61 73 65 20 4D 30 32 00
0301CE	ImageDescription	TIFF-FX Profile M Test Sources	54 49 46 46 2D 46 58 20 50 72 6F 66 69 6C 65 20
0301DE			4D 20 54 65 73 74 20 53 6F 75 72 63 65 73 00
0301EE	Xresolution	400 pixels/inch	90 01 00 00 01 00 00 00
0301F6	Yresolution	400 pixels/inch	90 01 00 00 01 00 00 00
0301FE	XPosition	0 offset	00 00 00 00 90 01 00 00
030206	YPosition	0 offset	00 00 00 00 90 01 00 00
03020E	Software	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
03021E			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
03022E			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 32
03023E			32 20 30 37 3A 30 32 3A 35 39 20 50 4D 20 39 39
03024E			00
030252	SubIFDs	Offsets of 197202 and 197632	62 02 03 00 14 04 03 00
03025A	ImageLayer	2 (mask), 1 (first image to be imaged)	02 00 00 00 01 00 00 00

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
	IFD 1 → SubIFD 0 → Child IFD 0 (Bkgnd) Offset 197218 (0x30262H) NextIFDOffset 0 (0x0H)					
030262	Number of Directory Entries	–	–	–	22 entries	16 00
030264	NewSubfileType	254	Long	16	Child IFD (background) of a single page of a multi-page	FE 00 04 00 01 00 00 00 10 00 00 00
030270	ImageWidth	256	Long	864	A4	00 01 04 00 01 00 00 00 60 03 00 00
03027C	ImageLength	257	Long	n/a	1100 lines	01 01 04 00 01 00 00 00 4C 04 00 00
030288	BitsPerSample	258	Short	1	8, 8, 8 bit/sample	02 01 03 00 03 00 00 00 70 03 03 00
030294	Compression	259	Short	7	JPEG	03 01 03 00 01 00 00 00 07 00 00 00
0302A0	Photometric Interpretation	262	Short	10	ITU L*a*b*	06 01 03 00 01 00 00 00 0A 00 00 00
0302AC	FillOrder	266	Short	2	MSB first	0A 01 03 00 01 00 00 00 01 00 00 00
0302B8	DocumentName	269	ASCII	n/a	Test case M02	0D 01 02 00 0E 00 00 00 78 03 03 00
0302C4	ImageDescription	270	ASCII	n/a	TIFF-FX Profile M Test Sources	0E 01 02 00 1F 00 00 00 88 03 03 00
0302D0	StripOffsets	273	Long	n/a	199766 bytes	11 01 04 00 01 00 00 00 56 0C 03 00
0302DC	SamplesPerPixel	277	Short	1	3 sample/pixel	15 01 03 00 01 00 00 00 03 00 00 00
0302E8	RowsPerStrip	278	Long	=ImageLength	1100 rows	16 01 04 00 01 00 00 00 4C 04 00 00
0302F4	StripByteCounts	279	Long	n/a	113332 bytes	17 01 04 00 01 00 00 00 B4 BA 01 00
030300	Xresolution	282	Rational	200	100 pixels/inch	1A 01 05 00 01 00 00 00 A8 03 03 00
03030C	Yresolution	283	Rational	200	100 pixels/inch	1B 01 05 00 01 00 00 00 B0 03 03 00
030318	XPosition	286	Rational	n/a	0 X-offset	1E 01 05 00 01 00 00 00 B8 03 03 00
030324	YPosition	287	Rational	n/a	0 Y-offset	1F 01 05 00 01 00 00 00 C0 03 03 00
030330	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
03033C	PageNumber	297	Short	n/a	2 of 2	29 01 03 00 02 00 00 00 01 00 02 00
030348	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	31 01 02 00 41 00 00 00 C8 03 03 00
030354	ChromaSubSampling	530	Short	4:1:1	1:1:1	12 02 03 00 02 00 00 00 01 00 01 00
030360	ImageLayer	34732	Long	1, 1	1 (background), 1 (first image to be imaged)	AC 87 04 00 02 00 00 00 0C 04 03 00
						Next IFD offset 00 00 00 00

	IFD 1 → SubIFD 0 → Child IFD 0 (Bkgnd) Values longer than 4 bytes		
Offset	Description	Comments	Coding
030370	BitsPerSample	8, 8, 8	08 00 08 00 08 00
030378	DocumentName	Test Case M02	54 65 73 74 20 43 61 73 65 20 4D 30 32 00
030388	ImageDescription	TIFF-FX Profile M Test Sources	54 49 46 46 2D 46 58 20 50 72 6F 66 69 6C 65 20
030398			4D 20 54 65 73 74 20 53 6F 75 72 63 65 73 00
0303A8	Xresolution	100 pixels/inch	64 00 00 00 01 00 00 00

0303B0	Yresolution				100 pixels/inch	64 00 00 00 01 00 00 00
0303B8	XPosition				0 offset	00 00 00 00 90 01 00 00
0303C0	YPosition				0 offset	00 00 00 00 90 01 00 00
0303C8	Software				Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
0303D8						66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
0303E8						74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 32
0303F8						32 20 30 37 3A 30 32 3A 35 39 20 50 4D 20 39 39
030408						00
03040C	ImageLayer				1 (background), 1 (first image to be imaged)	01 00 00 00 01 00 00 00

IFD 1 → SubIFD 1 → Child IFD 0 (Frgnd) Offset 197652 (0x30414H) NextIFDOffset 0 (0x0H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
030414	Number of Directory Entries	–	–	–	22 entries	16 00
030416	NewSubfileType	254	Long	16	Child IFD (foreground) of a single page of a multi-page	FE 00 04 00 01 00 00 00 10 00 00 00
030422	ImageWidth	256	Long	1728	A4	00 01 04 00 01 00 00 00 C0 06 00 00
03042E	ImageLength	257	Long	n/a	2200 lines	01 01 04 00 01 00 00 00 98 08 00 00
03043A	BitsPerSample	258	Short	1	8, 8, 8 bit/sample	02 01 03 00 03 00 00 00 22 05 03 00
030446	Compression	259	Short	7	JPEG	03 01 03 00 01 00 00 00 07 00 00 00
030452	Photometric Interpretation	262	Short	10	ITU L*a*b*	06 01 03 00 01 00 00 00 0A 00 00 00
03045E	FillOrder	266	Short	2	MSB first	0A 01 03 00 01 00 00 00 01 00 00 00
03046A	DocumentName	269	ASCII	n/a	Test case M02	0D 01 02 00 0E 00 00 00 2A 05 03 00
030476	ImageDescription	270	ASCII	n/a	TIFF-FX Profile M Test Sources	0E 01 02 00 1F 00 00 00 3A 05 03 00
030482	StripOffsets	273	Long	n/a	313098 bytes	11 01 04 00 01 00 00 00 0A C7 04 00
03048E	SamplesPerPixel	277	Short	1	3 sample/pixel	15 01 03 00 01 00 00 00 03 00 00 00
03049A	RowsPerStrip	278	Long	=ImageLength	2200 rows	16 01 04 00 01 00 00 00 98 08 00 00
0304A6	StripByteCounts	279	Long	n/a	61782 bytes	17 01 04 00 01 00 00 00 56 F1 00 00
0304B2	Xresolution	282	Rational	200	200 pixels/inch	1A 01 05 00 01 00 00 00 5A 05 03 00
0304BE	Yresolution	283	Rational	200	200 pixels/inch	1B 01 05 00 01 00 00 00 62 05 03 00
0304CA	XPosition	286	Rational	n/a	0 X-offset	1E 01 05 00 01 00 00 00 6A 05 03 00
0304D6	YPosition	287	Rational	n/a	0 Y-offset	1F 01 05 00 01 00 00 00 72 05 03 00
0304E2	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
0304EE	PageNumber	297	Short	n/a	2 of 2	29 01 03 00 02 00 00 00 01 00 02 00
0304FA	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	31 01 02 00 41 00 00 00 7A 05 03 00

030506	ChromaSubSampling	530	Short	4:1:1	4:1:1	12 02 03 00 02 00 00 00 02 00 02 00
030512	ImageLayer	34732	Long	3, 1	3 (foreground), 1 (first image to be imaged)	AC 87 04 00 02 00 00 00 BE 05 03 00
						Next IFD offset 00 00 00 00

IFD 1 → SubIFD 1 → Child IFD 0 (Frgnd) Values longer than 4 bytes

Offset	Description	Comments	Coding
030522	BitsPerSample	8, 8, 8	08 00 08 00 08 00
03052A	DocumentName	Test Case M02	54 65 73 74 20 43 61 73 65 20 4D 30 32 00
03053A	ImageDescription	TIFF-FX Profile M Test Sources	54 49 46 46 2D 46 58 20 50 72 6F 66 69 6C 65 20
03054A			4D 20 54 65 73 74 20 53 6F 75 72 65 73 00
03055A	Xresolution	200 pixels/inch	C8 00 00 00 01 00 00 00
030562	Yresolution	200 pixels/inch	C8 00 00 00 01 00 00 00
03056A	XPosition	0 offset	00 00 00 00 90 01 00 00
030572	YPosition	0 offset	00 00 00 00 90 01 00 00
03057A	Software	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
03058A			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
03059A			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 32
0305AA			32 20 30 37 3A 30 32 3A 35 39 20 50 4D 20 39 39
0305BA			00
0305BE	ImageLayer	3 (foreground), 1 (first image to be imaged)	03 00 00 00 01 00 00 00

Image data

Offset	Description	Comments
000305c6H - 00030c54H	IFD 1 (Mask) Strip 0	Compressed data
00030c56H - 0004c70aH	IFD 1 (Bkgnd) Strip 0	Compressed data
0004c70aH - 0005b860H	IFD 1 (Frgnd) Strip 0	Compressed data

IV.5.2 Three layers & multi-strip per layer: Mask with T.85 JBIG compression, Background with JPEG compression and Foreground with JBIG compression and T.43 color encoded ITU L*a*b*

3-layer (BG/M/FG), 200/400/200 resolution with FG having both 400 and 200 resolution, JPEG/JBIG/JBIG compression, multi-strip image with little-endian byte order and StripRowCounts used, BG & FG has strip with X and YPosition >0, ChromaSubsampling BG=4:1:1, FG LayerBaseColor changes between strip, LSB FillOrder, based on test case Profile M M11

Table IV.5-2/T.37 – Coding example of TIFF header, IFD and image data

Header					File Length 300028 bytes	
Offset	**Description**				**Comments**	**Coding**
0000	Octet order				Little endian order	49 49
0002	File identifier				42, TIFF file	2A 00
0004	1st IFD offset				Offset of IFD 0	08 00 00 00

IFD0 (Mask) Offset 8 (0x8H) NextIFDOffset 88046 (0x4157eeH)

Offset	**Description**	**Tag code**	**Type**	**Minimum capabilities**	**Comments**	**Coding sample**
0008	Number of Directory Entries	–	–	–	23 entries	17 00
000A	NewSubfileType	254	Long	18	primary IFD of a single page of a multi-page	FE 00 04 00 01 00 00 00 12 00 00 00
0016	ImageWidth	256	Long	3456	A4	00 01 04 00 01 00 00 00 80 0D 00 00
0022	ImageLength	257	Long	n/a	4400 lines	01 01 04 00 01 00 00 00 30 11 00 00
002E	BitsPerSample	258	Short	1	1 bit/sample	02 01 03 00 01 00 00 00 01 00 00 00
003A	Compression	259	Short	4	9, JBIG T.85	03 01 03 00 01 00 00 00 09 00 00 00
0046	Photometric Interpretation	262	Short	0	0 is white	06 01 03 00 01 00 00 00 00 00 00 00
0052	FillOrder	266	Short	2	LSB first	0A 01 03 00 01 00 00 00 02 00 00 00
005E	DocumentName	269	ASCII	n/a	Test case M11	0D 01 02 00 0E 00 00 00 22 01 00 00
006A	ImageDescription	270	ASCII	n/a	TIFF-FX Profile M Test Sources	0E 01 02 00 1F 00 00 00 32 01 00 00
0076	StripOffsets	273	Long	n/a	1726 38498 68626 77078 88022 bytes	11 01 04 00 05 00 00 00 52 01 00 00
0082	SamplesPerPixel	277	Short	1	1 sample/pixel	15 01 03 00 01 00 00 00 01 00 00 00
008E	StripByteCounts	279	Long	n/a	892 5588 8451 10944 22 bytes	17 01 04 00 05 00 00 00 66 01 00 00
009A	Xresolution	282	Rational	200	400 pixels/inch	1A 01 05 00 01 00 00 00 7A 01 00 00
00A6	Yresolution	283	Rational	200	400 pixels/inch	1B 01 05 00 01 00 00 82 01 00 00
00B2	XPosition	286	Rational	n/a	0 X-offset	1E 01 05 00 01 00 00 00 8A 01 00 00
00BE	YPosition	287	Rational	n/a	0 Y-offset	1F 01 05 00 01 00 00 00 92 01 00 00
00CA	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
00D6	PageNumber	297	Short	n/a	1 of 2	29 01 03 00 02 00 00 00 00 00 02 00
00E2	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	31 01 02 00 41 00 00 00 9A 01 00 00
00EE	SubIFDs	330	Long	n/a	Offsets of 514 and 948	4A 01 04 00 02 00 00 00 DE 01 00 00

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding
00FA	GlobalParameters IFD	400	Long	n/a	1660 offset	90 01 04 00 01 00 00 00 7C 06 00 00
0106	StripRowCounts	559	Long	n/a	486 rows	2F 02 04 00 05 00 00 00 E6 01 00 00
0112	ImageLayer	34732	Long	2, 1	2 (mask), 1 (first image to be imaged)	AC 87 04 00 02 00 00 00 FA 01 00 00
						Next IFD offset EE 57 01 00

IFD 0 (Mask) Values longer than 4 bytes

Offset	Description	Comments	Coding
000122	DocumentName	Test case M11	54 65 73 74 20 43 61 73 65 20 4D 31 31 00
000132	ImageDescription	TIFF-FX Profile M Test Sources	54 49 46 46 2D 46 58 20 50 72 6F 66 69 6C 65 20
000142			4D 20 54 65 73 74 20 53 6F 75 72 63 65 73 00
000152	StripOffsets	1726 38498 68626 77078 88022 bytes	BE 06 00 00 62 96 00 00 12 0C 01 00 16 2D 01 00
000162			D6 57 01 00
000166	StripByteCounts	892 5588 8451 10944 22 bytes	7C 03 00 00 D4 15 00 00 03 21 00 00 C0 2A 00 00
000176			16 00 00 00
00017A	Xresolution	400 pixels/inch	90 01 00 00 01 00 00 00
000182	Yresolution	400 pixels/inch	90 01 00 00 01 00 00 00
00018A	XPosition	0 offset	00 00 00 00 90 01 00 00
000192	YPosition	0 offset	00 00 00 00 90 01 00 00
00019A	Software	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
0001AA			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
0001BA			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 32
0001CA			32 20 30 37 3A 30 32 3A 35 39 20 50 4D 20 39 39
0001DA			00
0001DE	SubIFDs	Offsets of 514 and 948	02 02 00 00 B4 03 00 00
0001E6	StripRowCounts	486 rows	15 02 00 00 3B 01 00 00 A0 03 00 00 00 03 00 00
0001F6			40 07 00 00
0001FA	ImageLayer	2 (mask), 1 (first image to be imaged)	02 00 00 00 01 00 00 00

IFD 0 ➔ SubIFD 0 ➔ Child IFD 0 (Bkgnd) Offset 514 (0x202H) NextIFDOffset 0 (0x0H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
000202	Number of Directory Entries	–	–	–	22 entries	16 00
000204	NewSubfileType	254	Long	16	Child IFD (background) of a single page of a multi-page	FE 00 04 00 01 00 00 00 10 00 00 00
000210	ImageWidth	256	Long	n/a	900 pels	00 01 04 00 01 00 00 00 84 03 00 00

00021C	ImageLength	257	Long	n/a	600 lines	01 01 04 00 01 00 00 00 58 02 00 00
000228	BitsPerSample	258	Short	1	8, 8, 8 bit/sample	02 01 03 00 03 00 00 00 10 03 00 00
000234	Compression	259	Short	7	JPEG	03 01 03 00 01 00 00 00 07 00 00 00
000240	Photometric Interpretation	262	Short	10	ITU L*a*b*	06 01 03 00 01 00 00 00 0A 00 00 00
00024C	FillOrder	266	Short	2	LSB first	0A 01 03 00 01 00 00 00 02 00 00 00
000258	DocumentName	269	ASCII	n/a	Test case M11	0D 01 02 00 0E 00 00 00 18 03 00 00
000264	ImageDescription	270	ASCII	n/a	TIFF-FX Profile M Test Sources	0E 01 02 00 1F 00 00 00 28 03 00 00
000270	StripOffsets	273	Long	n/a	2618 bytes	11 01 04 00 01 00 00 00 3A 0A 00 00
00027C	SamplesPerPixel	277	Short	1	3 sample/pixel	15 01 03 00 01 00 00 00 03 00 00 00
000288	RowsPerStrip	278	Long	=ImageLength	600 rows	16 01 04 00 01 00 00 00 58 02 00 00
000294	StripByteCounts	279	Long	n/a	35878 bytes	17 01 04 00 01 00 00 00 26 8C 00 00
0002A0	Xresolution	282	Rational	200	200 pixels/inch	1A 01 05 00 01 00 00 00 48 03 00 00
0002AC	Yresolution	283	Rational	200	200 pixels/inch	1B 01 05 00 01 00 00 00 50 03 00 00
0002B8	XPosition	286	Rational	n/a	1.935 X-offset	1E 01 05 00 01 00 00 00 58 03 00 00
0002C4	YPosition	287	Rational	n/a	6.360 Y-offset	1F 01 05 00 01 00 00 00 60 03 00 00
0002D0	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
0002DC	PageNumber	297	Short	n/a	1 of 2	29 01 03 00 02 00 00 00 00 00 02 00
0002E8	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	31 01 02 00 41 00 00 00 68 03 00 00
0002F4	ChromaSubSampling	530	Short	4:1:1	4:1:1	12 02 03 00 02 00 00 00 02 00 02 00
000300	ImageLayer	34732	Long	1, 1	1 (background), 1 (first image to be imaged)	AC 87 04 00 02 00 00 00 AC 03 00 00
						Next IFD offset 00 00 00 00

IFD 0 → SubIFD 0 → Child IFD 0 (Bkgnd) Values longer than 4 bytes

Offset	Description	Comments	Coding
000310	BitsPerSample	8, 8, 8	08 00 08 00 08 00
000318	DocumentName	Test Case M11	54 65 73 74 20 43 61 73 65 20 4D 31 31 00
000328	ImageDescription	TIFF-FX Profile M Test Sources	54 49 46 46 2D 46 58 20 50 72 6F 66 69 6C 65 20
000338			4D 20 54 65 73 74 20 53 6F 75 72 63 65 73 00
000348	Xresolution	200 pixels/inch	C8 00 00 00 01 00 00 00
000350	Yresolution	200 pixels/inch	C8 00 00 00 01 00 00 00
000358	XPosition	1.935 offset	06 03 00 00 90 01 00 00
000360	YPosition	6.360 offset	F0 09 00 00 90 01 00 00

Offset						
000368	Software			Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99		58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
000378						66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
000388						74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 32
000398						32 20 30 37 3A 30 32 3A 35 39 20 50 4D 20 39 39
0003A8						00
0003AC	ImageLayer			1 (background), 1 (first image to be imaged)		01 00 00 00 01 00 00 00

IFD 0 → SubIFD 1 → Child IFD 0 (Frgnd) Offset 948 (0x3b4H) NextIFDOffset1238 (0x4d6H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
0003B4	Number of Directory Entries	–	–	–	19 entries	13 00
0003B6	NewSubfileType	254	Long	16	Child IFD (foreground) of a single page of a multi-page	FE 00 04 00 01 00 00 00 10 00 00 00
0003C2	ImageWidth	256	Long	3456	3456 pels, A4	00 01 04 00 01 00 00 00 80 0D 00 00
0003CE	ImageLength	257	Long	n/a	533 lines	01 01 04 00 01 00 00 15 02 00 00
0003DA	BitsPerSample	258	Short	1	8, 8, 8 bit/sample	02 01 03 00 03 00 00 00 9E 04 00 00
0003E6	Compression	259	Short	n/a	No compression	03 01 03 00 01 00 00 00 01 00 00 00
0003F2	Photometric Interpretation	262	Short	10	ITU L*a*b*	06 01 03 00 01 00 00 00 0A 00 00 00
0003FE	FillOrder	266	Short	2	LSB first	0A 01 03 00 01 00 00 00 02 00 00 00
00040A	StripOffsets	273	Long	n/a	38498 bytes	11 01 04 00 01 00 00 00 62 96 00 00
000416	SamplesPerPixel	277	Short	1	3 sample/pixel	15 01 03 00 01 00 00 00 03 00 00 00
000422	RowsPerStrip	278	Long	=ImageLength	533 rows	16 01 04 00 01 00 00 00 15 02 00 00
00042E	StripByteCounts	279	Long	n/a	0 bytes	17 01 04 00 01 00 00 00 00 00 00 00
00043A	Xresolution	282	Rational	200	400 pixels/inch	1A 01 05 00 01 00 00 00 A6 04 00 00
000446	Yresolution	283	Rational	200	400 pixels/inch	1B 01 05 00 01 00 00 00 AE 04 00 00
000452	XPosition	286	Rational	n/a	0 X-offset	1E 01 05 00 01 00 00 00 B6 04 00 00
00045E	YPosition	287	Rational	n/a	0 Y-offset	1F 01 05 00 01 00 00 00 BE 04 00 00
00046A	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
000476	PageNumber	297	Short	n/a	1 of 2	29 01 03 00 02 00 00 00 00 00 02 00
000482	DefaultImageColor	434	Short	black	1222 offset	B2 01 03 00 03 00 00 00 C6 04 00 00
00048E	ImageLayer	34732	Long	3, 1	3 (foreground), 1 (first image to be imaged)	AC 87 04 00 02 00 00 00 CE 04 00 00
						Next IFD offset D6 04 00 00

IFD 0 → SubIFD 1 → Child IFD 0 (Frgnd) Values longer than 4 bytes

Offset	Description	Comments	Coding
00049E	BitsPerSample	8, 8, 8	08 00 08 00 08 00
0004A6	Xresolution	400 pixels/inch	90 01 00 00 01 00 00 00
000AE	Yresolution	400 pixels/inch	90 01 00 00 01 00 00 00
0004B6	XPosition	0 offset	00 00 00 00 90 01 00 00

0004BE	YPosition			0 offset	00 00 00 00 90 01 00 00
0004C6	DefaultImageColor			L*=57.25, a*=76.67, b*=65.88	92 00 F3 00 BE 00
0004CE	ImageLayer			3 (foreground), 1 (first image to be imaged)	03 00 00 00 01 00 00 00

IFD 0 → SubIFD 1 → Child IFD 1 (Frgnd) Offset 1238 (0x4d6H) NextIFDOffset 0 (0x0H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
0004D6	Number of Directory Entries	–	–	–	21 entries	15 00
0004D8	NewSubfileType	254	Long	16	Child IFD (foreground) of a single page of a multi-page	FE 00 04 00 01 00 00 00 10 00 00 00
0004E4	ImageWidth	256	Long		736	00 01 04 00 01 00 00 00 E0 02 00 00
0004F0	ImageLength	257	Long	n/a	464 lines	01 01 04 00 01 00 00 00 D0 01 00 00
0004FC	BitsPerSample	258	Short	1	8, 8, 8 bit/sample	02 01 03 00 03 00 00 00 D8 05 00 00
000508	Compression	259	Short	n/a	JBIG color, T.43	03 01 03 00 01 00 00 00 0A 00 00 00
000514	Photometric Interpretation	262	Short	10	ITU L*a*b*	06 01 03 00 01 00 00 00 0A 00 00 00
000520	FillOrder	266	Short	2	LSB first	0A 01 03 00 01 00 00 00 02 00 00 00
00052C	DocumentName	269	ASCII	n/a	Test case M11	0D 01 02 00 0E 00 00 00 E0 05 00 00
000538	ImageDescription	270	ASCII	n/a	TIFF-FX Profile M Test Sources	0E 01 02 00 1F 00 00 00 F0 05 00 00
000544	StripOffsets	273	Long	n/a	44086 bytes	11 01 04 00 01 00 00 00 36 AC 00 00
000550	SamplesPerPixel	277	Short	1	3 sample/pixel	15 01 03 00 01 00 00 00 03 00 00 00
00055C	RowsPerStrip	278	Long	=ImageLength	464 rows	16 01 04 00 01 00 00 00 D0 01 00 00
000568	StripByteCounts	279	Long	n/a	24539 bytes	17 01 04 00 01 00 00 00 DB 5F 00 00
000574	Xresolution	282	Rational	200	200 pixels/inch	1A 01 05 00 01 00 00 00 10 06 00 00
000580	Yresolution	283	Rational	200	200 pixels/inch	1B 01 05 00 01 00 00 00 18 06 00 00
00058C	XPosition	286	Rational	n/a	3.600 X-offset	1E 01 05 00 01 00 00 00 20 06 00 00
000598	YPosition	287	Rational	n/a	2.120 Y-offset	1F 01 05 00 01 00 00 00 28 06 00 00
0005A4	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
0005B0	PageNumber	297	Short	n/a	1 of 2	29 01 03 00 02 00 00 00 00 00 02 00
0005BC	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	31 01 02 00 41 00 00 00 30 06 00 00
0005C8	ImageLayer	34732	Long	3, 2	3 (foreground), 2 (second image to be imaged)	AC 87 04 00 02 00 00 00 74 06 00 00
					Next IFD offset 00 00 00 00	

IFD 0 → SubIFD 1 → Child IFD 1 (Frgnd) Values longer than 4 bytes

Offset	Description	Comments	Coding
0005D8	BitsPerSample	8, 8, 8	08 00 08 00 08 00
0005E0	DocumentName	Test Case M11	54 65 73 74 20 43 61 73 65 20 4D 31 31 00

0005F0	ImageDescription			TIFF-FX Profile M Test Sources	54 49 46 46 2D 46 58 20 50 72 6F 66 69 6C 65 20
000600					4D 20 54 65 73 74 20 53 6F 75 72 63 65 73 00
000610	Xresolution			200 pixels/inch	C8 00 00 00 01 00 00 00
000618	Yresolution			200 pixels/inch	C8 00 00 00 01 00 00 00
000620	XPosition			3.600 offset	A0 05 00 00 90 01 00 00
000628	YPosition			2.120 offset	50 03 00 00 90 01 00 00
000630	Software			Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
000640					66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
000650					74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 32
000660					32 20 30 37 3A 30 32 3A 35 39 20 50 4D 20 39 39
000670					00
000674	ImageLayer			3 (foreground), 2 (second image to be imaged)	03 00 00 00 02 00 00 00

IFD 0 → GP IFD → Child IFD 0 Offset 1660 (0x67cH) NextIFDOffset 0 (0x0H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
00067C	Number of Directory Entries	–	–	–	5 entries	05 00
00067E	ProfileType	401	Long	1	1 (Group 3 fax)	91 01 04 00 01 00 00 00 01 00 00 00
00068A	FaxProfile	402	Byte	6	Mixed Raster Content, Profile M	92 01 01 00 01 00 00 00 06 00 00 00
000696	CodingMethod	403	Long	2	112, JBIG (T.85), JPEG (T.81) and JBIG color (T.43)	93 01 04 00 01 00 00 00 70 00 00 00
0006A2	VersionYear	404	Byte	n/a	1999	94 01 01 00 04 00 00 00 31 39 39 39
0006AE	ModeNumber	405	Byte	1	1	95 01 01 00 01 00 00 00 00 00 00 00
						Next IFD offset 00 00 00 00

Image data

Offset	Description	Comments
000006beH - 00000a3aH	IFD 0 (Mask) Strip 0	Compressed data
00000a3aH - 00009660H	IFD 0 SubIFD 0 Child IFD 0 (Bkgnd) Strip 0	Compressed data
00009662H - 00009662H	IFD 0 SubIFD 1 Child IFD 0 (Frgnd) Strip 0	Compressed data
00009662H - 0000ac36H	IFD 0 (Mask) Strip 1	Compressed data
0000ac36H - 00010c11H	IFD 0 SubIFD 1 Child IFD 1 (Frgnd) Strip 0	Compressed data
00010c12H - 00012d15H	IFD 0 (Mask) Strip 2	Compressed data
00012d16H - 000157d6H	IFD 0 (Mask) Strip 3	Compressed data
000157d6H - 000157ecH	IFD 0 (Mask) Strip 4	Compressed data

IFD1 (Mask) Offset 88046 (0x157eeH) NextIFDOffset 0 (0x0H)						
Offset	**Description**	**Tag code**	**Type**	**Minimum capabilities**	**Comments**	**Coding sample**
0157EE	Number of Directory Entries	–	–	–	22 entries	16 00
0157F0	NewSubfileType	254	Long	18	primary IFD of a single page of a multi-page	FE 00 04 00 01 00 00 00 12 00 00 00
0157FC	ImageWidth	256	Long	3456	A4	00 01 04 00 01 00 00 00 80 0D 00 00
015808	ImageLength	257	Long	n/a	4400 lines	01 01 04 00 01 00 00 00 30 11 00 00
015814	BitsPerSample	258	Short	1	1 bit/sample	02 01 03 00 01 00 00 00 01 00 00 00
015820	Compression	259	Short	4	9, JBIG (T.85)	03 01 03 00 01 00 00 00 09 00 00 00
01582C	Photometric Interpretation	262	Short	0	0 is white	06 01 03 00 01 00 00 00 00 00 00 00
015838	FillOrder	266	Short	2	LSB first	0A 01 03 00 01 00 00 00 02 00 00 00
015844	DocumentName	269	ASCII	n/a	Test case M11	0D 01 02 00 0E 00 00 00 FC 58 01 00
015850	ImageDescription	270	ASCII	n/a	TIFF-FX Profile M Test Sources	0E 01 02 00 1F 00 00 00 0C 59 01 00
01585C	StripOffsets	273	Long	n/a	89204 bytes	11 01 04 00 01 00 00 00 74 5C 01 00
015868	SamplesPerPixel	277	Short	1	1 sample/pixel	15 01 03 00 01 00 00 00 01 00 00 00
015874	RowsPerStrip	278	Long	=ImageLength	4400 rows	16 01 04 00 01 00 00 00 30 11 00 00
015880	StripByteCounts	279	Long	n/a	917 bytes	17 01 04 00 01 00 00 00 95 03 00 00
01588C	Xresolution	282	Rational	200	400 pixels/inch	1A 01 05 00 01 00 00 00 2C 59 01 00
015898	Yresolution	283	Rational	200	400 pixels/inch	1B 01 05 00 01 00 00 00 34 59 01 00
0158A4	XPosition	286	Rational	n/a	0 X-offset	1E 01 05 00 01 00 00 00 3C 59 01 00
0158B0	YPosition	287	Rational	n/a	0 Y-offset	1F 01 05 00 01 00 00 00 44 59 01 00
0158BC	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
0158C8	PageNumber	297	Short	n/a	2 of 2	29 01 03 00 02 00 00 00 01 00 02 00
0158D4	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	31 01 02 00 41 00 00 00 4C 59 01 00
0158E0	SubIFDs	330	Long	n/a	Offsets of 88480 and 88914	4A 01 04 00 02 00 00 00 90 59 01 00
0158EC	ImageLayer	34732	Long	2, 1	2 (mask),1 (first image to be imaged)	AC 87 04 00 02 00 00 00 98 59 01 00
						Next IFD offset 00 00 00 00

IFD 1 (Mask) Values longer than 4 bytes			
Offset	**Description**	**Comments**	**Coding**
0158FC	DocumentName	Test case M11	54 65 73 74 20 43 61 73 65 20 4D 31 31 00
01590C	ImageDescription	TIFF-FX Profile M Test Sources	54 49 46 46 2D 46 58 20 50 72 6F 66 69 6C 65 20
01591C			4D 20 54 65 73 74 20 53 6F 75 72 63 65 73 00
01592C	Xresolution	400 pixels/inch	90 01 00 00 01 00 00 00
015934	Yresolution	400 pixels/inch	90 01 00 00 01 00 00 00

Offset	Description					Coding sample
01593C	XPosition			0 offset		00 00 00 00 90 01 00 00
015944	YPosition			0 offset		00 00 00 00 90 01 00 00
01594C	Software			Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99		58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
01595C						66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
01596C						74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 32
01597C						32 20 30 37 3A 30 32 3A 35 39 20 50 4D 20 39 39
01598C						00
015990	SubIFDs			Offsets of 88480 and 88914		A0 59 01 00 52 5B 01 00
015998	ImageLayer			2 (mask), 1 (first image to be imaged)		02 00 00 00 01 00 00 00

IFD 1 → SubIFD 0 → Child IFD 0 (Bkgnd) Offset 88480 (0x159a0H) NextIFDOffset 0 (0x0H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
0159A0	Number of Directory Entries	–	–	–	22 entries	16 00
0159A2	NewSubfileType	254	Long	16	Child IFD (background) of a single page of a multi-page	FE 00 04 00 01 00 00 00 10 00 00 00
0159AE	ImageWidth	256	Long		1198 pels	00 01 04 00 01 00 00 00 AE 04 00 00
0159BA	ImageLength	257	Long	n/a	1352 lines	01 01 04 00 01 00 00 00 48 05 00 00
0159C6	BitsPerSample	258	Short	1	8, 8, 8 bit/sample	02 01 03 00 03 00 00 00 AE 5A 01 00
0159D2	Compression	259	Short	7	JPEG	03 01 03 00 01 00 00 00 07 00 00 00
0159DE	Photometric Interpretation	262	Short	10	ITU L*a*b*	06 01 03 00 01 00 00 00 0A 00 00 00
0159EA	FillOrder	266	Short	2	LSB first	0A 01 03 00 01 00 00 00 02 00 00 00
0159F6	DocumentName	269	ASCII	n/a	Test case M11	0D 01 02 00 0E 00 00 00 B6 5A 01 00
015A02	ImageDescription	270	ASCII	n/a	TIFF-FX Profile M Test Sources	0E 01 02 00 1F 00 00 00 C6 5A 01 00
015A0E	StripOffsets	273	Long	n/a	90124 bytes	11 01 04 00 01 00 00 00 0C 60 01 00
015A1A	SamplesPerPixel	277	Short	1	3 sample/pixel	15 01 03 00 01 00 00 00 03 00 00 00
015A26	RowsPerStrip	278	Long	=ImageLength	1352 rows	16 01 04 00 01 00 00 00 48 05 00 00
015A32	StripByteCounts	279	Long	n/a	209902 bytes	17 01 04 00 01 00 00 00 EE 33 03 00
015A3E	Xresolution	282	Rational	200	200 pixels/inch	1A 01 05 00 01 00 00 00 E6 5A 01 00
015A4A	Yresolution	283	Rational	200	200 pixels/inch	1B 01 05 00 01 00 00 00 EE 5A 01 00
015A56	XPosition	286	Rational	n/a	1.185 X-offset	1E 01 05 00 01 00 00 00 F6 5A 01 00
015A62	YPosition	287	Rational	n/a	1.345 Y-offset	1F 01 05 00 01 00 00 00 FE 5A 01 00
015A6E	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
015A7A	PageNumber	297	Short	n/a	2 of 2	29 01 03 00 02 00 00 00 01 00 02 00
015A86	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	31 01 02 00 41 00 00 00 06 5B 01 00

015A92	ChromaSubSampling	530	Short	4:1:1	4:1:1	12 02 03 00 02 00 00 00 02 00 02 00
015A9E	ImageLayer	34732	Long	1, 1	1 (background), 1 (first image to be imaged)	AC 87 04 00 02 00 00 00 4A 5B 01 00
						Next IFD offset 00 00 00 00

IFD 1 → SubIFD 0 → Child IFD 0 (Bkgnd) Values longer than 4 bytes

Offset	Description	Comments	Coding
015AAE	BitsPerSample	8, 8, 8	08 00 08 00 08 00
015AB6	DocumentName	Test Case M11	54 65 73 74 20 43 61 73 65 20 4D 31 31 00
015AC6	ImageDescription	TIFF-FX Profile M Test Sources	54 49 46 46 2D 46 58 20 50 72 6F 66 69 6C 65 20
015AD6			4D 20 54 65 73 74 20 53 6F 75 72 63 65 73 00
015AE6	Xresolution	200 pixels/inch	C8 00 00 00 01 00 00 00
015AEE	Yresolution	200 pixels/inch	C8 00 00 00 01 00 00 00
015AF6	XPosition	1.185 offset	DA 01 00 00 90 01 00 00
015AFE	YPosition	1.345 offset	1A 02 00 00 90 01 00 00
015B06	Software	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
015B16			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
015B26			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 32
015B36			32 20 30 37 3A 30 32 3A 35 39 20 50 4D 20 39 39
015B46			00
015B4A	ImageLayer	1 (background), 1 (first image to be imaged)	01 00 00 00 01 00 00 00

IFD 1 → SubIFD 1 → Child IFD 0 (Frgnd) Offset 88914 (0x15b52H) NextIFDOffset 0 (0x0H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
015B52	Number of Directory Entries	–	–	–	19 entries	13 00
015B54	NewSubfileType	254	Long	16	Child IFD (foreground) of a single page of a multi-page	FE 00 04 00 01 00 00 00 10 00 00 00
015B60	ImageWidth	256	Long	3456	A4	00 01 04 00 01 00 00 00 80 0D 00 00
015B6C	ImageLength	257	Long	n/a	4400 lines	01 01 04 00 01 00 00 00 30 11 00 00
015B78	BitsPerSample	258	Short	1	8, 8, 8 bit/sample	02 01 03 00 03 00 00 00 3C 5C 01 00
015B84	Compression	259	Short		uncompressed	03 01 03 00 01 00 00 00 01 00 00 00
015B90	Photometric Interpretation	262	Short	10	ITU L*a*b*	06 01 03 00 01 00 00 00 0A 00 00 00
015B9C	FillOrder	266	Short	2	LSB first	0A 01 03 00 01 00 00 00 02 00 00 00
015BA8	StripOffsets	273	Long	n/a	300028 bytes	11 01 04 00 01 00 00 00 FC 93 04 00
015BB4	SamplesPerPixel	277	Short	1	3 sample/pixel	15 01 03 00 01 00 00 00 03 00 00 00
015BC0	RowsPerStrip	278	Long	=ImageLength	4400 rows	16 01 04 00 01 00 00 00 30 11 00 00

015BCC	StripByteCounts	279	Long	n/a	0 bytes	17 01 04 00 01 00 00 00 00 00 00 00
015BD8	Xresolution	282	Rational	200	400 pixels/inch	1A 01 05 00 01 00 00 00 44 5C 01 00
015BE4	Yresolution	283	Rational	200	400 pixels/inch	1B 01 05 00 01 00 00 00 4C 5C 01 00
015BF0	XPosition	286	Rational	n/a	0 X-offset	1E 01 05 00 01 00 00 00 54 5C 01 00
015BFC	YPosition	287	Rational	n/a	0 Y-offset	1F 01 05 00 01 00 00 00 5C 5C 01 00
015C08	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
015C14	PageNumber	297	Short	n/a	2 of 2	29 01 03 00 02 00 00 00 01 00 02 00
015C20	DefaultImageColor	434	Short	Black	89188 offset	B2 01 03 00 03 00 00 00 64 5C 01 00
015C2C	ImageLayer	34732	Long	3, 1	3 (foreground), 1 (first image to be imaged)	AC 87 04 00 02 00 00 00 6C 5C 01 00
						Next IFD offset 00 00 00 00

IFD 1 → SubIFD 1 → Child IFD 0 (Frgnd) Values longer than 4 bytes

Offset	Description	Comments	Coding
015C3C	BitsPerSample	8, 8, 8	08 00 08 00 08 00
015C44	Xresolution	400 pixels/inch	90 01 00 00 01 00 00 00
015C4C	Yresolution	400 pixels/inch	90 01 00 00 01 00 00 00
015C54	XPosition	0 offset	00 00 00 00 90 01 00 00
015C5C	YPosition	0 offset	00 00 00 00 90 01 00 00
015C64	DefaultImageColor	L*=97.65, a*=-14.67, b*=87.06	F9 00 6A 00 DA 00
015C6C	ImageLayer	3 (foreground), 1 (first image to be imaged)	03 00 00 00 01 00 00 00

Image data

Offset	Description	Comments
00015c74H - 00016009H	IFD 1 (Mask) Strip 0	Compressed data
0001600cH - 000493faH	IFD 1 SubIFD 0 Child IFD 0 (Bkgnd) Strip 0	Compressed data
000493fcH - 000493fcH	IFD 1 SubIFD 1 Child IFD 0 (Frgnd) Strip 0	Compressed data

IV.5.3 Two layers & single strip per layer: Mask with MH (1-dimensional T.4) compression and Foreground with JPEG compression and T.4 Annex E ITU L*a*b* encoding

2-layer (M/FG), -/200/200 resolution, -/MH/JPEG compression, single strip image, ChromaSubsampling FG=4:1:1, FG LayerBaseColor other than black, FG has strip with X and YPosition >0, MSB FillOrder, little-endian byte order, based on test case Profile M M6

Table IV.5-3/T.37 – Coding example of TIFF header, IFD and image data

Header					File Length 262032 bytes	
Offset	**Description**				**Comments**	**Coding**
0000	Octet order				Little endian order	49 49
0002	File identifier				42, TIFF file	2A 00
0004	1st IFD offset				Offset of IFD 0	08 00 00 00

IFD0 (Mask) Offset 8 (0x8H) NextIFDOffset 83670 (0x146d6H)						
Offset	**Description**	**Tag code**	**Type**	**Minimum capabilities**	**Comments**	**Coding sample**
0008	Number of Directory Entries	–	–	–	24 entries	18 00
000A	NewSubfileType	254	Long	18	primary IFD of a single page of a multi-page	FE 00 04 00 01 00 00 00 12 00 00 00
0016	ImageWidth	256	Long	1728	A4	00 01 04 00 01 00 00 00 C0 06 00 00
0022	ImageLength	257	Long	n/a	2200 lines	01 01 04 00 01 00 00 00 98 08 00 00
002E	BitsPerSample	258	Short	1	1 bit/sample	02 01 03 00 01 00 00 00 01 00 00 00
003A	Compression	259	Short	4	T.4 MH or MR	03 01 03 00 01 00 00 00 03 00 00 00
0046	Photometric Interpretation	262	Short	0	0 is white	06 01 03 00 01 00 00 00 00 00 00 00
0052	FillOrder	266	Short	2	MSB first	0A 01 03 00 01 00 00 00 01 00 00 00
005E	DocumentName	269	ASCII	n/a	Test case M06	0D 01 02 00 0E 00 00 00 2E 01 00 00
006A	ImageDescription	270	ASCII	n/a	TIFF-FX Profile M Test Sources	0E 01 02 00 1F 00 00 00 3E 01 00 00
0076	StripOffsets	273	Long	n/a	958 bytes	11 01 04 00 01 00 00 00 BE 03 00 00
0082	SamplesPerPixel	277	Short	1	1 sample/pixel	15 01 03 00 01 00 00 00 01 00 00 00
008E	RowsPerStrip	278	Long	=ImageLength	2200 rows	16 01 04 00 01 00 00 00 98 08 00 00
009A	StripByteCounts	279	Long	n/a	38033 bytes	17 01 04 00 01 00 00 00 91 94 00 00
00A6	Xresolution	282	Rational	200	200 pixels/inch	1A 01 05 00 01 00 00 00 5E 01 00 00
00B2	Yresolution	283	Rational	200	200 pixels/inch	1B 01 05 00 01 00 00 00 66 01 00 00
00BE	XPosition	286	Rational	n/a	0 X-offset	1E 01 05 00 01 00 00 00 6E 01 00 00
00CA	YPosition	287	Rational	n/a	0 Y-offset	1F 01 05 00 01 00 00 00 76 01 00 00
00D6	T4Option	292	Long	0	1-dimensional T.4 MH, byte aligned	24 01 04 00 01 00 00 00 04 00 00 00
00E2	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
00EE	PageNumber	297	Short	n/a	1 of 2	29 01 03 00 02 00 00 00 00 00 02 00
00FA	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	31 01 02 00 41 00 00 00 7E 01 00 00
0106	SubIFDs	330	Long	n/a	Offsets of 458	4A 01 04 00 01 00 00 00 CA 01 00 00

0112	GlobalParameters IFD	400	Long	n/a	892 offset	90 01 04 00 01 00 00 00 7C 03 00 00
011E	ImageLayer	34732	Long	2, 1	2 (mask), 1 (first image to be imaged)	AC 87 04 00 02 00 00 00 C2 01 00 00
						Next IFD offset D6 46 01 00

IFD 0 (Mask) Values longer than 4 bytes

Offset	Description	Comments	Coding
00012E	DocumentName	Test case M06	54 65 73 74 20 43 61 73 65 20 4D 30 36 00
00013E	ImageDescription	TIFF-FX Profile M Test Sources	54 49 46 46 2D 46 58 20 50 72 6F 66 69 6C 65 20
00014E			4D 20 54 65 73 74 20 53 6F 75 72 65 73 00
00015E	Xresolution	400 pixels/inch	C8 00 00 00 01 00 00 00
000166	Yresolution	400 pixels/inch	C8 00 00 00 01 00 00 00
00016E	XPosition	0 offset	00 00 00 00 C8 00 00 00
000176	YPosition	0 offset	00 00 00 00 C8 00 00 00
00017E	Software	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
00018E			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
00019E			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 32
0001AE			32 20 30 37 3A 30 32 3A 35 39 20 50 4D 20 39 39
0001BE			00
0001C2	ImageLayer	2 (mask), 1 (first image to be imaged)	02 00 00 00 01 00 00 00

IFD 0 → SubIFD 0 → Child IFD 0 (Frgnd) Offset 458 (0x1caH) NextIFDOffset 0 (0x0H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
0001CA	Number of Directory Entries	–	–	–	22 entries	16 00
0001CC	NewSubfileType	254	Long	16	Child IFD (foreground) of a single page of a multi-page	FE 00 04 00 01 00 00 00 10 00 00 00
0001D8	ImageWidth	256	Long	1728	736 pels	00 01 04 00 01 00 00 00 E0 02 00 00
0001E4	ImageLength	257	Long	n/a	464 lines	01 01 04 00 01 00 00 00 D0 01 00 00
0001F0	BitsPerSample	258	Short	1	8, 8, 8 bit/sample	02 01 03 00 03 00 00 00 D8 02 00 00
0001FC	Compression	259	Short	7	JPEG	03 01 03 00 01 00 00 00 07 00 00 00
000208	Photometric Interpretation	262	Short	10	ITU L*a*b*	06 01 03 00 01 00 00 00 0A 00 00 00
000214	FillOrder	266	Short	2	MSB first	0A 01 03 00 01 00 00 00 01 00 00 00
000220	DocumentName	269	ASCII	n/a	Test case M06	0D 01 02 00 0E 00 00 00 E0 02 00 00
00022C	ImageDescription	270	ASCII	n/a	TIFF-FX Profile M Test Sources	0E 01 02 00 1F 00 00 00 F0 02 00 00
000238	StripOffsets	273	Long	n/a	38994 bytes	11 01 04 00 01 00 00 00 52 98 00 00

000244	SamplesPerPixel	277	Short	1	3 sample/pixel	15 01 03 00 01 00 00 00 03 00 00 00
000250	RowsPerStrip	278	Long	=ImageLength	464 rows	16 01 04 00 01 00 00 00 D0 01 00 00
00025C	StripByteCounts	279	Long	n/a	44673 bytes	17 01 04 00 01 00 00 00 81 AE 00 00
000268	Xresolution	282	Rational	200	200 pixels/inch	1A 01 05 00 01 00 00 00 10 03 00 00
000274	Yresolution	283	Rational	200	200 pixels/inch	1B 01 05 00 01 00 00 00 18 03 00 00
000280	XPosition	286	Rational	n/a	3.600 X-offset	1E 01 05 00 01 00 00 00 20 03 00 00
00028C	YPosition	287	Rational	n/a	2.140 Y-offset	1F 01 05 00 01 00 00 00 28 03 00 00
000298	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
0002A4	PageNumber	297	Short	n/a	1 of 2	29 01 03 00 02 00 00 00 00 00 02 00
0002B0	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	31 01 02 00 41 00 00 00 30 03 00 00
0002BC	ChromaSubSampling	530	Short	4:1:1	4:1:1	12 02 03 00 02 00 00 00 02 00 02 00
0002C8	ImageLayer	34732	Long	3, 1	3 (foreground), 1 (first image to be imaged)	AC 87 04 00 02 00 00 00 74 03 00 00
						Next IFD offset 00 00 00 00

IFD 0 → SubIFD 0 → Child IFD 0 (Frgnd) Values longer than 4 bytes

Offset	Description	Comments	Coding
0002D8	BitsPerSample	8, 8, 8	08 00 08 00 08 00
0002E0	DocumentName	Test Case M06	54 65 73 74 20 43 61 73 65 20 4D 30 36 00
0002F0	ImageDescription	TIFF-FX Profile M Test Sources	54 49 46 46 2D 46 58 20 50 72 6F 66 69 6C 65 20
000300			4D 20 54 65 73 74 20 53 6F 75 72 63 65 73 00
000310	Xresolution	200 pixels/inch	C8 00 00 00 01 00 00 00
000318	Yresolution	200 pixels/inch	C8 00 00 00 01 00 00 00
000320	XPosition	3.600 offset	D0 02 00 00 C8 00 00 00
000328	YPosition	2.140 offset	AC 01 00 00 C8 00 00 00
000330	Software	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
000340			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
000350			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 32
000360			32 20 30 37 3A 30 32 3A 35 39 20 50 4D 20 39 39
000370			00
000374	ImageLayer	3 (foreground), 1 (first image to be imaged)	03 00 00 00 01 00 00 00

IFD 0 → GP IFD → Child IFD 0 Offset 892 (0x37cH) NextIFDOffset 0 (0x0H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
00037C	Number of Directory Entries	–	–	–	5 entries	05 00
00037E	ProfileType	401	Long	1	1 (Group 3 fax)	91 01 04 00 01 00 00 00 01 00 00 00

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
00038A	FaxProfile	402	Byte	6	Mixed Raster Content, Profile M	92 01 01 00 01 00 00 00 06 00 00 00
000396	CodingMethod	403	Long	2	34, T.4 (MH) and T.81 (JPEG)	93 01 04 00 01 00 00 00 22 00 00 00
0003A2	VersionYear	404	Byte	n/a	1999	94 01 01 00 04 00 00 00 31 39 39 39
0003AE	ModeNumber	405	Byte	1	1	95 01 01 00 01 00 00 00 00 00 00 00
						Next IFD offset 00 00 00 00

Image data

Offset	Description	Comments
0003beH - 00984fH	IFD 0 (Mask) Strip 0	Compressed data
009852H - 0146d3H	IFD 0 (Frgnd) Strip 0	Compressed data

IFD1 (Mask) Offset 83670 (0x146d6H) NextIFDOffset 0 (0x0H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
0146D6	Number of Directory Entries	–	–	–	23 entries	17 00
0146D8	NewSubfileType	254	Long	18	primary IFD of a single page of a multi-page	FE 00 04 00 01 00 00 00 12 00 00 00
0146E4	ImageWidth	256	Long	1728	A4	00 01 04 00 01 00 00 00 C0 06 00 00
0146F0	ImageLength	257	Long	n/a	2200 lines	01 01 04 00 01 00 00 00 98 08 00 00
0146FC	BitsPerSample	258	Short	1	1 bit/sample	02 01 03 00 01 00 00 00 01 00 00 00
014708	Compression	259	Short	4	T.4 MH or MR	03 01 03 00 01 00 00 00 03 00 00 00
014714	Photometric Interpretation	262	Short	0	0 is white	06 01 03 00 01 00 00 00 00 00 00 00
014720	FillOrder	266	Short	2	MSB first	0A 01 03 00 01 00 00 00 01 00 00 00
01472C	DocumentName	269	ASCII	n/a	Test case M06	0D 01 02 00 0E 00 00 00 F0 47 01 00
01473B	ImageDescription	270	ASCII	n/a	TIFF-FX Profile M Test Sources	0E 01 02 00 1F 00 00 00 00 48 01 00
014744	StripOffsets	273	Long	n/a	84832 bytes	11 01 04 00 01 00 00 00 60 4B 01 00
014750	SamplesPerPixel	277	Short	1	1 sample/pixel	15 01 03 00 01 00 00 00 01 00 00 00
01475C	RowsPerStrip	278	Long	=ImageLength	2200 rows	16 01 04 00 01 00 00 00 98 08 00 00
014768	StripByteCounts	279	Long	n/a	13209 bytes	17 01 04 00 01 00 00 00 99 33 00 00
014774	Xresolution	282	Rational	200	200 pixels/inch	1A 01 05 00 01 00 00 00 20 48 01 00
014780	Yresolution	283	Rational	200	200 pixels/inch	1B 01 05 00 01 00 00 00 28 48 01 00
01478C	XPosition	286	Rational	n/a	0 X-offset	1E 01 05 00 01 00 00 00 30 48 01 00
014798	YPosition	287	Rational	n/a	0 Y-offset	1F 01 05 00 01 00 00 00 38 48 01 00
0147A4	T4Option	292	Long	0	1-dimensional T.4 MH, byte aligned	24 01 04 00 01 00 00 00 04 00 00 00
0147B0	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
0147BC	PageNumber	297	Short	n/a	2 of 2	29 01 03 00 02 00 00 00 01 00 02 00
0147C8	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	31 01 02 00 41 00 00 00 40 48 01 00

0147D4	SubIFDs	330	Long	n/a	Offsets of 84108	4A 01 04 00 01 00 00 00 8C 48 01 00
0147E0	ImageLayer	34732	Long	2, 1	2 (mask), 1 (first image to be imaged)	AC 87 04 00 02 00 00 00 84 48 01 00
						Next IFD offset 00 00 00 00

IFD 1 (Mask) Values longer than 4 bytes

Offset	Description	Comments	Coding
0147F0	DocumentName	Test case M06	54 65 73 74 20 43 61 73 65 20 4D 30 36 00
014800	ImageDescription	TIFF-FX Profile M Test Sources	54 49 46 46 2D 46 58 20 50 72 6F 66 69 6C 65 20
014810			4D 20 54 65 73 74 20 53 6F 75 72 63 65 73 00
014820	Xresolution	400 pixels/inch	C8 00 00 00 01 00 00 00
014828	Yresolution	400 pixels/inch	C8 00 00 00 01 00 00 00
014830	XPosition	0 offset	00 00 00 00 C8 00 00 00
014838	YPosition	0 offset	00 00 00 00 C8 00 00 00
014840	Software	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
014850			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
014860			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 32
014870			32 20 30 37 3A 30 32 3A 35 39 20 50 4D 20 39 39
014880			00
014884	ImageLayer	2 (mask), 1 (first image to be imaged)	02 00 00 00 01 00 00 00

IFD 1 → SubIFD 0 → Child IFD 0 (Frgnd) Offset 84108 (0x1488cH) NextIFDOffset 84398 (0x149aeH)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
01488C	Number of Directory Entries	–	–	–	19 entries	13 00
01488E	NewSubfileType	254	Long	16	Child IFD (foreground) of a single page of a multi-page	FE 00 04 00 01 00 00 00 10 00 00 00
01489A	ImageWidth	256	Long	1728	1728 pels	00 01 04 00 01 00 00 00 C0 06 00 00
0148A6	ImageLength	257	Long	n/a	2200 lines	01 01 04 00 01 00 00 00 98 08 00 00
0148B2	BitsPerSample	258	Short	1	8, 8, 8 bit/sample	02 01 03 00 03 00 00 00 76 49 01 00
0148BE	Compression	259	Short	7	No compression	03 01 03 00 01 00 00 00 01 00 00 00
0148CA	Photometric Interpretation	262	Short	10	ITU L*a*b*	06 01 03 00 01 00 00 00 0A 00 00 00
0148D6	FillOrder	266	Short	2	MSB first	0A 01 03 00 01 00 00 00 01 00 00 00
0148E2	StripOffsets	273	Long	n/a	98044 bytes	11 01 04 00 01 00 00 00 FC 7E 01 00
0148EE	SamplesPerPixel	277	Short	1	3 sample/pixel	15 01 03 00 01 00 00 00 03 00 00 00
0148FA	RowsPerStrip	278	Long	=ImageLength	2200 rows	16 01 04 00 01 00 00 00 98 08 00 00
014906	StripByteCounts	279	Long	n/a	0 bytes	17 01 04 00 01 00 00 00 00 00 00 00

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
014912	Xresolution	282	Rational	200	200 pixels/inch	1A 01 05 00 01 00 00 00 7E 49 01 00
01491E	Yresolution	283	Rational	200	200 pixels/inch	1B 01 05 00 01 00 00 00 86 49 01 00
01492A	XPosition	286	Rational	n/a	0 X-offset	1E 01 05 00 01 00 00 00 8E 49 01 00
014936	YPosition	287	Rational	n/a	0 Y-offset	1F 01 05 00 01 00 00 00 96 49 01 00
014942	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
01494E	PageNumber	297	Short	n/a	2 of 2	29 01 03 00 02 00 00 00 01 00 02 00
01495A	DefaultImageColor	434	Short	black	84382 offset	B2 01 03 00 03 00 00 00 9E 49 01 00
014966	ImageLayer	34732	Long	3, 1	3 (foreground), 1 (first image to be imaged)	AC 87 04 00 02 00 00 00 A6 49 01 00
						Next IFD offset AE 49 01 00

IFD 1 → SubIFD 0 → Child IFD 0 (Frgnd) Values longer than 4 bytes

Offset	Description	Comments	Coding
014976	BitsPerSample	8, 8, 8	08 00 08 00 08 00
01497E	Xresolution	200 pixels/inch	C8 00 00 00 01 00 00 00
014986	Yresolution	200 pixels/inch	C8 00 00 00 01 00 00 00
01498E	XPosition	3.600 offset	00 00 00 00 C8 00 00 00
014996	YPosition	2.140 offset	00 00 00 00 C8 00 00 00
01499E	DefaultImageColor	L*=100, a*=0, b*=3.92	FF 00 80 00 65 00
0149A6	ImageLayer	3 (foreground), 1 (first image to be imaged)	03 00 00 00 01 00 00 00

IFD 1 → SubIFD 0 → Child IFD 1 (Frgnd) Offset 84398 (0x149aeH) NextIFDOffset 0 (0x0H)

Offset	Description	Tag code	Type	Minimum capabilities	Comments	Coding sample
0149AE	Number of Directory Entries	–	–	–	22 entries	16 00
0149B0	NewSubfileType	254	Long	16	Child IFD (foreground) of a single page of a multi-page	FE 00 04 00 01 00 00 00 10 00 00 00
0149BC	ImageWidth	256	Long	1728	1015 pels	00 01 04 00 01 00 00 00 F7 03 00 00
0149C8	ImageLength	257	Long	n/a	1174 lines	01 01 04 00 01 00 00 00 96 04 00 00
0149D4	BitsPerSample	258	Short	1	8, 8, 8 bit/sample	02 01 03 00 03 00 00 00 BC 4A 01 00
0149E0	Compression	259	Short	7	JPEG	03 01 03 00 01 00 00 00 07 00 00 00
0149EC	Photometric Interpretation	262	Short	10	ITU L*a*b*	06 01 03 00 01 00 00 00 0A 00 00 00
0149F8	FillOrder	266	Short	2	MSB first	0A 01 03 00 01 00 00 00 01 00 00 00
014A04	DocumentName	269	ASCII	n/a	Test case M06	0D 01 02 00 0E 00 00 00 C4 4A 01 00
014A10	ImageDescription	270	ASCII	n/a	TIFF-FX Profile M Test Sources	0E 01 02 00 1F 00 00 00 D4 4A 01 00
014A1C	StripOffsets	273	Long	n/a	98044 bytes	11 01 04 00 01 00 00 00 FC 7E 01 00
014A28	SamplesPerPixel	277	Short	1	3 sample/pixel	15 01 03 00 01 00 00 00 03 00 00 00
014A34	RowsPerStrip	278	Long	=ImageLength	1174 rows	16 01 04 00 01 00 00 00 96 04 00 00
014A40	StripByteCounts	279	Long	n/a	163988 bytes	17 01 04 00 01 00 00 00 94 80 02 00
014A4C	Xresolution	282	Rational	200	200 pixels/inch	1A 01 05 00 01 00 00 00 F4 4A 01 00
014A58	Yresolution	283	Rational	200	200 pixels/inch	1B 01 05 00 01 00 00 00 FC 4A 01 00
014A64	XPosition	286	Rational	n/a	1.185 X-offset	1E 01 05 00 01 00 00 00 04 4B 01 00

014A70	YPosition	287	Rational	n/a	1.345 Y-offset	1F 01 05 00 01 00 00 00 0C 4B 01 00
014A7C	ResolutionUnit	296	Short	2	inch	28 01 03 00 01 00 00 00 02 00 00 00
014A88	PageNumber	297	Short	n/a	2 of 2	29 01 03 00 02 00 00 00 01 00 02 00
014A94	Software	305	ASCII	n/a	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	31 01 02 00 41 00 00 00 14 4B 01 00
014AA0	ChromaSubSampling	530	Short	4:1:1	4:1:1	12 02 03 00 02 00 00 00 02 00 02 00
014AAC	ImageLayer	34732	Long	3, 1	3 (foreground), 2 (second image to be imaged)	AC 87 04 00 02 00 00 00 58 4B 01 00
					Next IFD offset 00 00 00 00	

IFD 1 → SubIFD 0 → Child IFD 1 (Frgnd) Values longer than 4 bytes

Offset	Description	Comments	Coding
014ABC	BitsPerSample	8, 8, 8	08 00 08 00 08 00
014AC4	DocumentName	Test Case M06	54 65 73 74 20 43 61 73 65 20 4D 30 36 00
014AD4	ImageDescription	TIFF-FX Profile M Test Sources	54 49 46 46 2D 46 58 20 50 72 6F 66 69 6C 65 20
014AE4			4D 20 54 65 73 74 20 53 6F 75 72 65 73 00
014AF4	Xresolution	200 pixels/inch	C8 00 00 00 01 00 00 00
014AFC	Yresolution	200 pixels/inch	C8 00 00 00 01 00 00 00
014B04	XPosition	1.185 offset	ED 00 00 00 C8 00 00 00
014B0C	YPosition	1.345 offset	0D 01 00 00 C8 00 00 00
014B14	Software	Xerox TIFF-FX Reference Implementation Mon Feb 22 07:02:59 PM 99	58 65 72 6F 78 20 54 49 46 46 2D 46 58 20 52 65
014B24			66 65 72 65 6E 63 65 20 49 6D 70 6C 65 6D 65 6E
014B34			74 61 74 69 6F 6E 20 4D 6F 6E 20 46 65 62 20 32
014B44			32 20 30 37 3A 30 32 3A 35 39 20 50 4D 20 39 39
014B54			00
014B58	ImageLayer	3 (foreground), 2 (second image to be imaged)	03 00 00 00 02 00 00 00

Image data

Offset	Description	Comments
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017efcH - 017efcH	IFD 1, Child IFD 0 (Frgnd) Strip 0	Compressed data
017efcH - 03ff90H	IFD 1, Child IFD 1 (Frgnd) Strip 0	Compressed data

SERIES DE RECOMENDACIONES DEL UIT-T

Serie A   Organización del trabajo del UIT-T

Serie B   Medios de expresión: definiciones, símbolos, clasificación

Serie C   Estadísticas generales de telecomunicaciones

Serie D   Principios generales de tarificación

Serie E   Explotación general de la red, servicio telefónico, explotación del servicio y factores humanos

Serie F   Servicios de telecomunicación no telefónicos

Serie G   Sistemas y medios de transmisión, sistemas y redes digitales

Serie H   Sistemas audiovisuales y multimedios

Serie I   Red digital de servicios integrados

Serie J   Transmisiones de señales radiofónicas, de televisión y de otras señales multimedios

Serie K   Protección contra las interferencias

Serie L   Construcción, instalación y protección de los cables y otros elementos de planta exterior

Serie M   RGT y mantenimiento de redes: sistemas de transmisión, circuitos telefónicos, telegrafía, facsímil y circuitos arrendados internacionales

Serie N   Mantenimiento: circuitos internacionales para transmisiones radiofónicas y de televisión

Serie O   Especificaciones de los aparatos de medida

Serie P   Calidad de transmisión telefónica, instalaciones telefónicas y redes locales

Serie Q   Conmutación y señalización

Serie R   Transmisión telegráfica

Serie S   Equipos terminales para servicios de telegrafía

Serie T   Terminales para servicios de telemática

Serie U   Conmutación telegráfica

Serie V   Comunicación de datos por la red telefónica

Serie X   Redes de datos y comunicación entre sistemas abiertos

Serie Y   Infraestructura mundial de la información

Serie Z   Lenguajes y aspectos generales de soporte lógico para sistemas de telecomunicación