



Imaging Databases and the Web

A Case Study

Warren Doubleday

Ballarat Tramway Museum Inc.

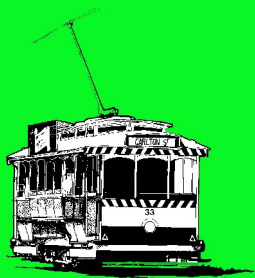
Ballarat Trams are Ballarat History



The Ballarat Tramway Museum

The BTM:

- Preserving Ballarat's Electric Tramway Heritage
- An Accredited Museum
- An Accredited Rail Safety Operator
- The collection:
 - ★ 16 electric trams, 1 horse tram, parts etc.
 - ★ Paper archives and other records, books
 - ★ Photographs, tickets, newspaper cuttings.
 - ★ Over 1700 images on file so far - 126MB, most jpg, some Photoshop.

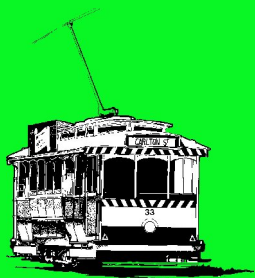


Imaging & Digitisation

Software: - Inmagic D/B Text Base

Museums Australia - Small Museums Cataloguing manual.

File name: eg btm412i.jpg
 btm1013i3.jpg



Imaging & Digitisation

Hardware:
(depot)

Pentium 166Mhz PC etc.
HP Photo Smart S20 scanner
HP CD-Writer Plus 7510e
HP 6L printer

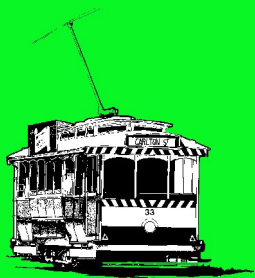
(personal)

Pentium III - 600Mhz
HP ScanJet 5p scanner
HP 6P printer
Adobe Photoshop









Scanners

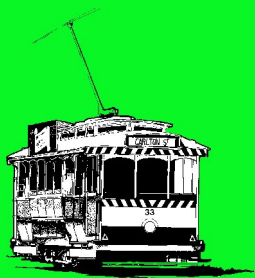
HP Photo Smart Scanner

- handles slides, 35mm film strips and 150mm x 100 prints
- other small items
- easy to use, good flexible software, reasonably fast
- has trouble handling other size negatives
- uses USB connection.

HP ScanJet 5P

- up to A4 sized items, but not slides and negatives.
- Adobe Photoshop - took a bit to learn
- reasonably quick, but SCSI card based
- scan rate (dpi) not as flexible.





Scanning the media

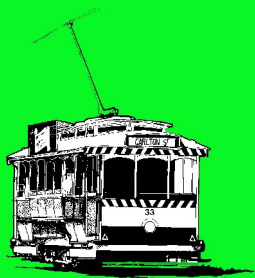
HP ScanJet - scanning to 7.5cm max dimension, 150 dpi

JPG (high quality)

Black & white photos - 30 to 70kB

Colour photos - 50 to 100+kB

Larger images > A4 - use a larger scanner or a
commercial service - very few.



Scanning the media

HP ScanJet - scanning to 7.5cm max dimension, 150 dpi







Scanning the Media 2

PhotoSmart S20 - studied scan rates & image quality

150mm x 100mm colour print - max scan 300 dpi

Jpg file image quality	Scan at 50 DPI	Scan at 100 DPI	Scan at 200 DPI	Scan at 300DPI
Medium	13	46	118	231
High	20	70	202	391
Maximum	70	296	978	2405

File sizes in kb





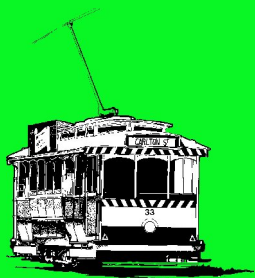
Scanning the Media 3

PhotoSmart S20 - scan rates and image quality
Colour Slides - up to 2400 dpi - 2.5" square.

Jpg file image quality	Scan at 300 DPI	Scan at 600 DPI	Scan at 1200 DPI	Scan at 2400 DPI
Medium	-	71	205	597
High	25	109	320	981
Maximum	120	419	1435	5053

File sizes in kb





Scanning the Media 4

Scanning - file size

- vary with hardware and image quality

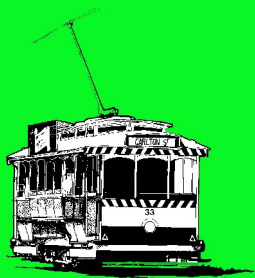
Possible download in the future?

Limit quality of the image if blown up.

Small files give better download times.

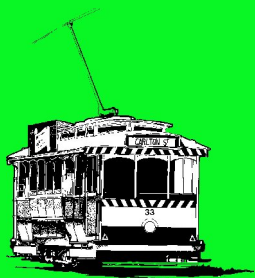
Recommend choose average file size around 50 to 60 kB,
BTM average - 53 kB.





Issues - Problems

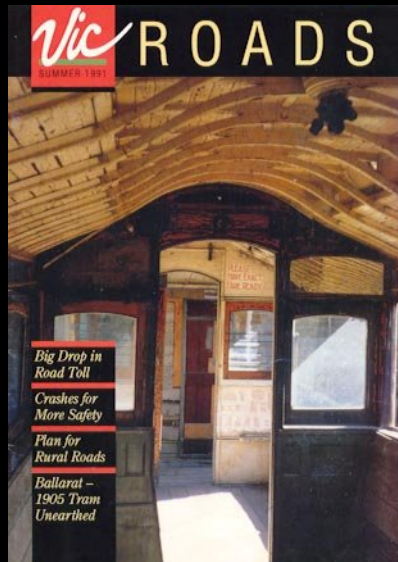
- Odd sized negatives
- Copyright
- Large slide collections
- film strips of 35mm negatives



Issues - Advantages

- Documents - OCR
- Preservation of images - unstable negatives
- Planning for exhibitions
- Less handling of originals
- Improves collection management
- Ease of offsite research
- E-mail of images - small jpg files
- Newspaper / magazines - scan with context
- Use on AMOL site - expanding access to our collection





Bypass brings Ballarat

Keith Fox

When construction of the Ballarat Bypass began in 1988, it was considered for what it would do to the city. But along the way, a great deal of the history from Ballarat's tram and street scene has been unearthed.

VICROADS needed to purchase a number of properties for the bypass and it was discovered that one house, earmarked for demolition had been built around the shell of an early electric tram which served the City from the turn of the century.

In the Ballarat Cup week-end last November, members of the Ballarat Tramway Preservation Society, assisted by VICROADS, set about excavating the tram with a large hydraulic crane.

The old tram, identified as No. 12, was on display in the town square.

At that time Ballarat's original tram driver's house was being converted to electric power.

The factory cable trams were used to Adelaide and Melbourne by the Adelaide and Melbourne Tramways and Electric Supply Company of Victoria.

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tram back to the future

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Acknowledgments

For grants to purchase equipment:

- Arts Victoria

The logo for Arts Victoria, featuring the word 'ARTS' in a bold, blue, sans-serif font, followed by 'Victoria' in a smaller, yellow, serif font.

- Australian Museums on Line





On the Web

BTM's Web Site -

- Maintained by Andrew Cox as Webmaster
- Averages 18 Visits per day from
- about 50 to 60 different countries
- Well known and often remarked about
- Collection and Fleet Conservation Policies
- Links to many other similar sites
- Does take time to up keep
- Part of our exhibitions
- Access to those who can't get to Ballarat - eg the Blind.



Australian Museums On Line

AMOL:

- Principal Gateway to Australian Gateways
- Gives basic details of “all” museums
- Supported by Govt. and major state museums
- Has “open” collections
- Widely used - 270 unique users per day average - world wide
- Has supported the small museums who can't afford the web
- Provides a forum mechanism for Museum Workers
- Current contractor is the Powerhouse Museum - Sydney
- Undergoing a review
- Future - very positive, funding, how to be operated.



Demo

Some Issues:

- Only recently placed on line by AMOL
- Something teething issues
- Problems with photos with a single registration number
- Adding information and images in the future
- Enables access to people who cannot come to Ballarat.

Imaging Databases and the Web

A Super Technical Presentation About Super Technology

Presenter: Warren Doubleday, Museum Services Manager, BTM

Session Chair: David Verrier

Session Secretary: John Shanks

Discussion

Bob Pearce (PETS) – Having deteriorating slides, do you put them through some correcting process before scanning for archive collection?

Answer – We would discuss it with the Board and play with the image if it were found necessary, capture and record a portion of a photo on high resolution.

John Radcliffe (AETM) – Asked about the life of these images and the back-up systems in place.

Answer – He keeps a back-up copy. If the jpg system goes out of fashion you will need to transfer to a new system. It would be important to keep on top of this.

David Frodsham (Crich) said that THS have looked at this digital data and it should transfer without loss.

Craig Tooke (MTPA) – Are there any plans for deteriorating slides.

Answer – They would keep a digital copy in an archival situation and try to retain the original slide.

Bruce Gamble (MOTAT) – Does he need to beware of the temptation to change and ‘improve’ the colour of an original slide?

Answer – He doesn’t do this. If he adjusted an image for a presentation, he would record that ‘this is adjusted information’.

Morris Moller (WTM) – What is the cost of doing this?

Answer – BTM has invested some A\$7,000 in this equipment. It would cost about A\$7,000 upwards for this system.

John Phillips (BTM) – What about the obsolescence of this equipment? What is going to happen in the future and what is the expected life of the equipment?

Answer – Technology is expected to keep moving forward. State libraries have considered this problem and reformat the images to a newer mode or storage system. Make sure you move images along technically and transfer it before the equipment dies!