



Towards a seamless Photo Workflow

**introducing the IPTC
photo metadata white paper**



Wouldn't it be nice ...


- ... to have an automatic image workflow from the photographer to the publisher?
- ... to know all the time, when and where and by whom a photo was created?
- ... to get your revenue share?
- ... not to rekey again, what others have already done earlier?
- ... to create high quality colour images for different types of publications?
- ... without manual intervention



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Just in case you have not heard of Ifra yet

- In 1961 Ifra was founded as association and registered in Switzerland
- Purpose of the association was to help newspapers to improve color printing to stay attractive for advertisers
- Ifra today is the world's leading service organisation for newspaper and media publishing and since more than 40 years the platform for decision-makers from the newspaper industry:
 - 3000 members in 70 countries
 - Magazine "newspaper techniques" each month in four languages
 - IfraExpo trade fair in October
 - More than 50 international conferences, seminars, training, consulting, research
 - Standardisation




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The same image opened using different colour spaces





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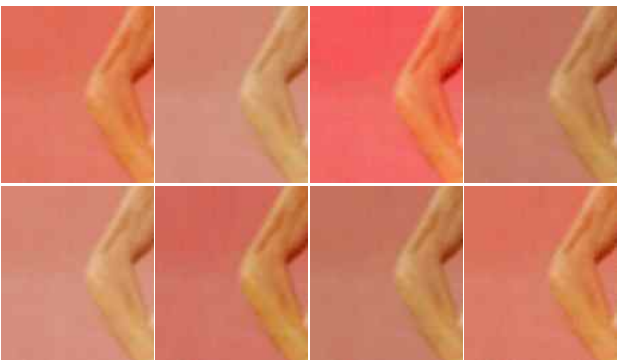
 **Different faces** 






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 **Different skin tones** 

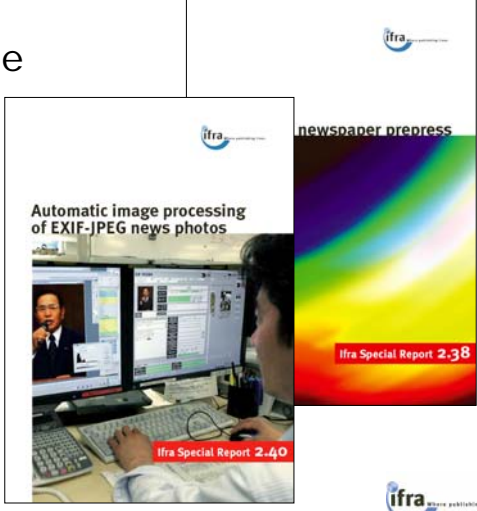




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Guessing is only second best

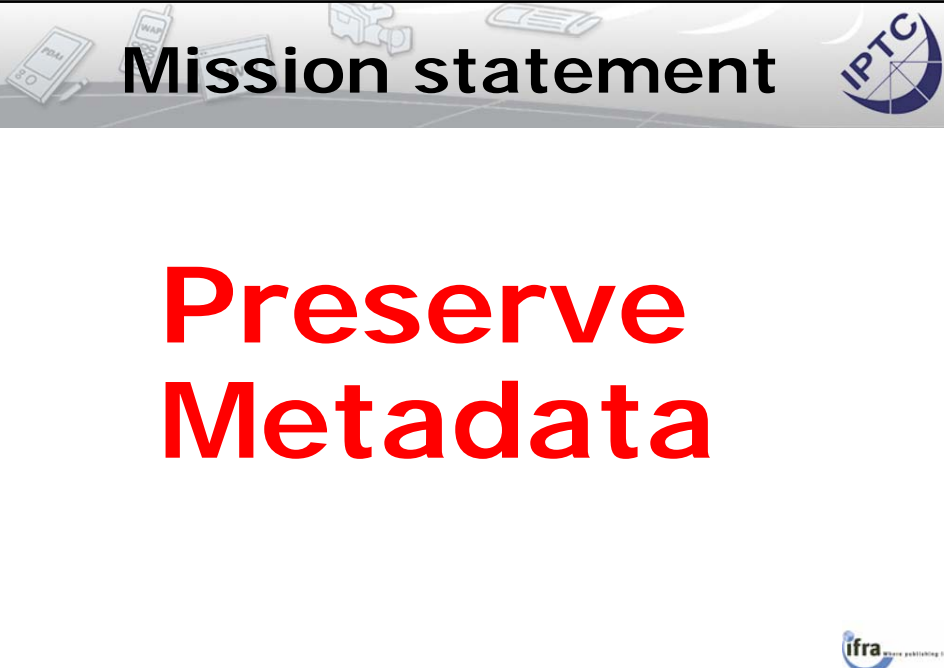
- ... knowing would be much better
- ... and wasn't the information available before?



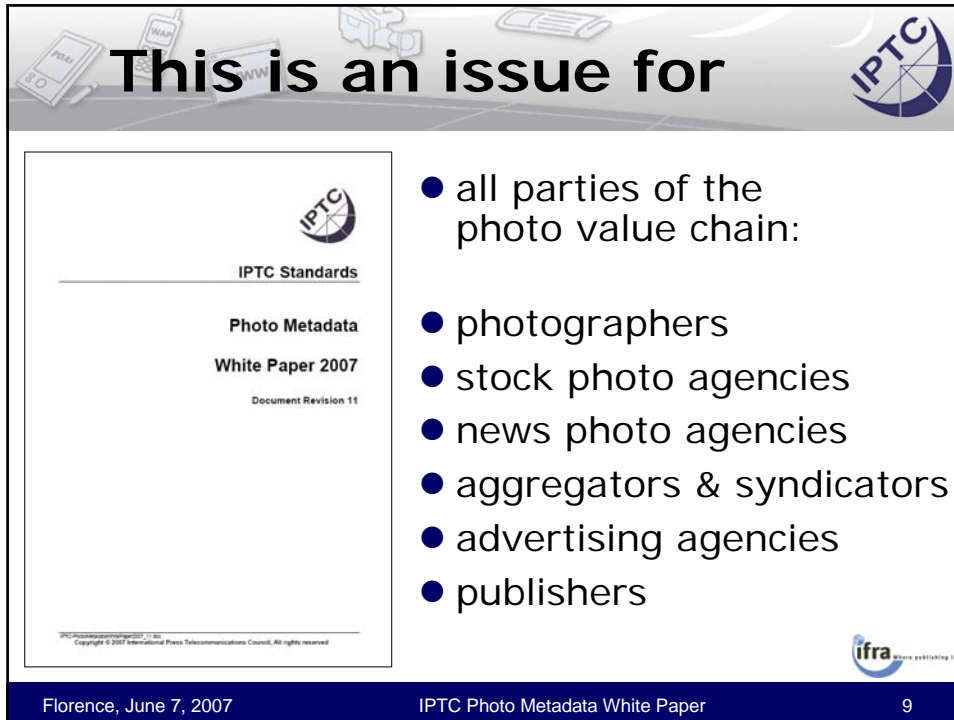
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Mission statement


Preserve Metadata




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This is an issue for





IPTC Standards


Photo Metadata

White Paper 2007

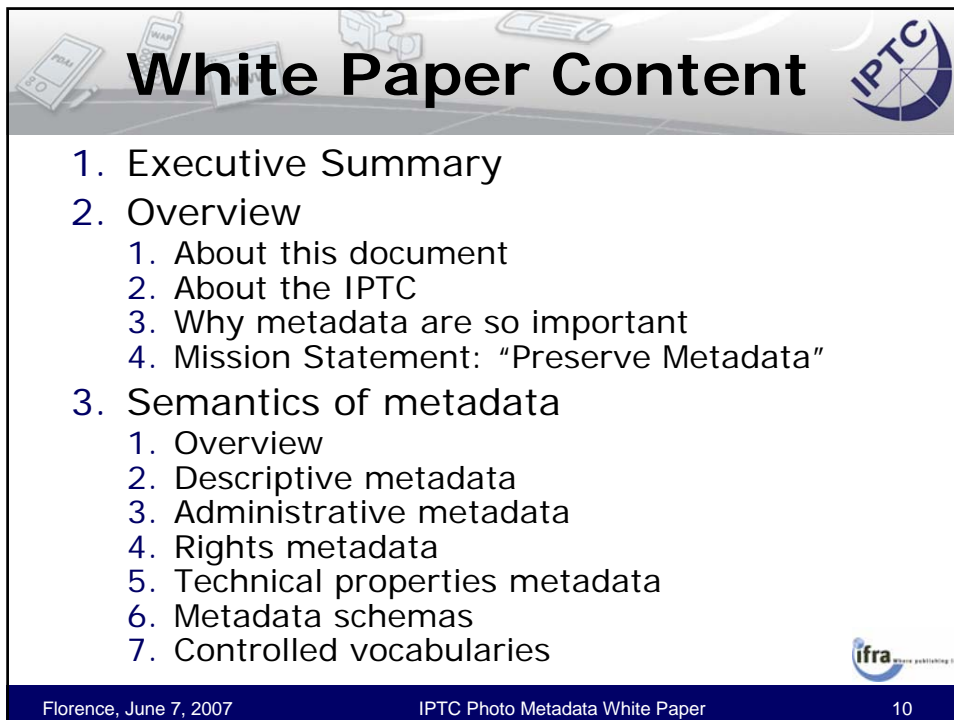
Document Revision 11

IPTC Standards Committee (ISC) 11.0
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- all parties of the photo value chain:
- photographers
- stock photo agencies
- news photo agencies
- aggregators & syndicators
- advertising agencies
- publishers




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White Paper Content



1. Executive Summary
2. Overview
 1. About this document
 2. About the IPTC
 3. Why metadata are so important
 4. Mission Statement: "Preserve Metadata"
3. Semantics of metadata
 1. Overview
 2. Descriptive metadata
 3. Administrative metadata
 4. Rights metadata
 5. Technical properties metadata
 6. Metadata schemas
 7. Controlled vocabularies




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White Paper Content

4. Technical implementation of metadata
 1. Overview
 2. IPTC IIM / Adobe image resource blocks
 3. Adobe XMP
 4. Exif (JEITA)
 5. PLUS
5. Photo workflows
 1. Photographer
 2. News photo agency
 3. Stock photo agency
 4. Photographer
 5. Newspaper
 6. Magazine
6. Conclusions and open issues
7. References (standards, parties involved)




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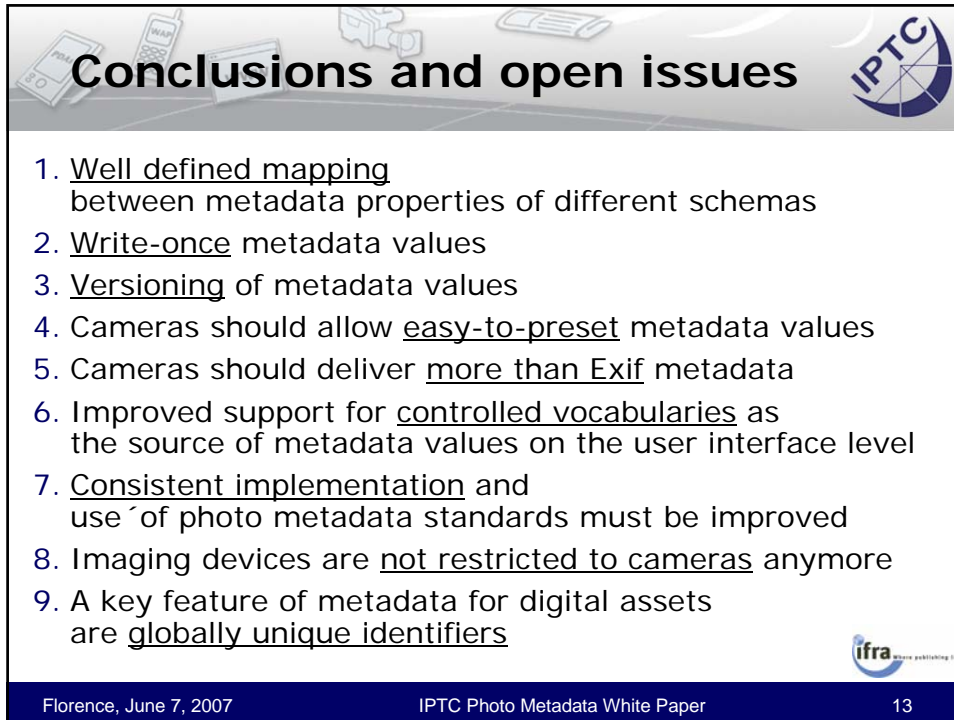


Metadata is essential ...

- to identify and track digital images
- to properly describe the content by natural or formal language, and in this way make it possible to easily search for photographs
- to express technical characteristics of photographs in an interoperable way across technical systems
- to express rights and licensing terms that pertain to a digital image, hence ownership metadata must never be removed
- for a seamless photo workflow and must be written in formats that can be easily understood by all



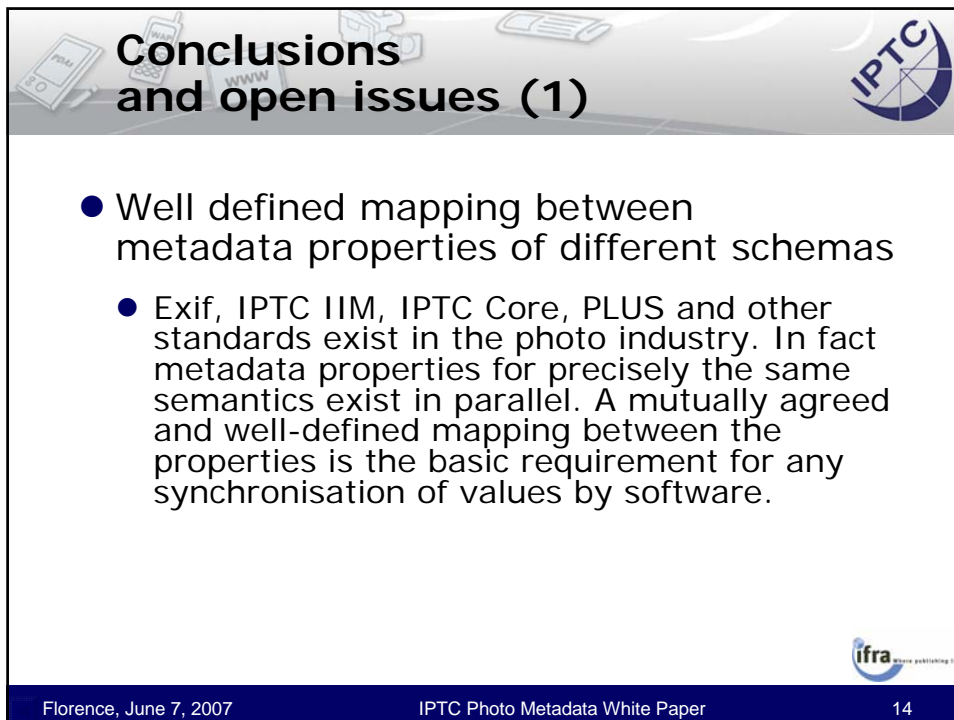
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Conclusions and open issues

1. Well defined mapping between metadata properties of different schemas
2. Write-once metadata values
3. Versioning of metadata values
4. Cameras should allow easy-to-preset metadata values
5. Cameras should deliver more than Exif metadata
6. Improved support for controlled vocabularies as the source of metadata values on the user interface level
7. Consistent implementation and use of photo metadata standards must be improved
8. Imaging devices are not restricted to cameras anymore
9. A key feature of metadata for digital assets are globally unique identifiers


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Conclusions and open issues (1)

- Well defined mapping between metadata properties of different schemas
 - Exif, IPTC IIM, IPTC Core, PLUS and other standards exist in the photo industry. In fact metadata properties for precisely the same semantics exist in parallel. A mutually agreed and well-defined mapping between the properties is the basic requirement for any synchronisation of values by software.


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Conclusions and open issues (2)




- Write-Once metadata values
 - Some metadata values can actually only be written once without abusing a stakeholder, such as the creator or the original copyright owner of a photograph.
 - To implement this requirement, the values of specific properties should be protected by a digital signature mechanism: it would not prevent changes to these fields but a check against the signature would reveal any changes.




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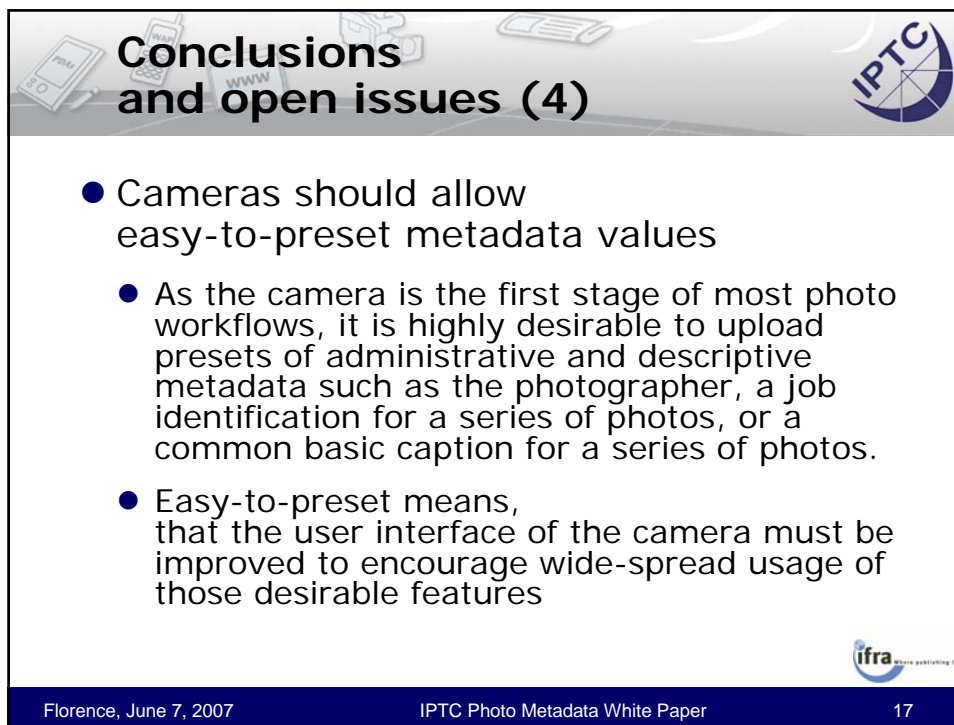
Conclusions and open issues (3)



- Versioning of metadata values
 - Currently only the latest edit of a property's value is stored. At least as an option it should be possible to save the previous version of a value after editing it.
 - Another option is that standards should define which properties should or must have versioned values.



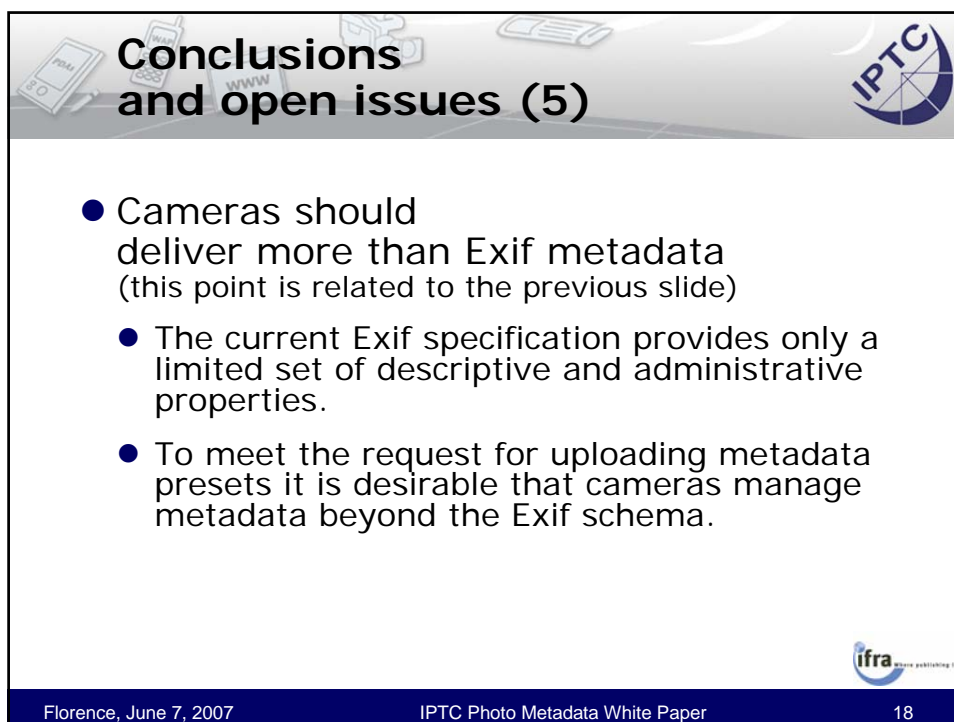
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Conclusions and open issues (4)

- Cameras should allow easy-to-preset metadata values
 - As the camera is the first stage of most photo workflows, it is highly desirable to upload presets of administrative and descriptive metadata such as the photographer, a job identification for a series of photos, or a common basic caption for a series of photos.
 - Easy-to-preset means, that the user interface of the camera must be improved to encourage wide-spread usage of those desirable features


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Conclusions and open issues (5)

- Cameras should deliver more than Exif metadata (this point is related to the previous slide)
 - The current Exif specification provides only a limited set of descriptive and administrative properties.
 - To meet the request for uploading metadata presets it is desirable that cameras manage metadata beyond the Exif schema.


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Conclusions and open issues (6)




- Improved support for controlled vocabularies (CVs) as the source of metadata values on the user interface level
- Currently, the vast majority of photo management software provides only limited support for this feature. CVs that map between a single term identifier and term names in different languages are a tremendous benefit to the international photo business – but their easy application by users must be supported by the software.
- Another requirement is to agree upon a common format for exchanging CV files.




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Conclusions and open issues (7)




- Consistent implementation and use of photo metadata standards must be improved
 - Standardisation bodies should not only provide technical specifications but also easy-to-understand names and descriptions for properties in different languages.
 - Software vendors should commit themselves to adopting the names as field labels and to provide on-the-spot help with the full definition of a field to deliver the specified semantics to the end user.
 - Furthermore, standardisation bodies should also provide user guides on how to fill in the metadata fields.
 - The IPTC has created a user guide for the IPTC Core and provides it at no cost to all software vendors and interested parties




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Conclusions and open issues (8)




- Imaging devices are not restricted to cameras anymore
 - To align pictures from non-camera sources to existing photo workflows, the makers of such devices should implement photo metadata at the same level as professional still camera makers.




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Conclusions and open issues (9)



- A key feature of metadata for digital assets – photographs included – are globally unique identifiers
 - Standardisation bodies and system vendors should start a joint effort to define and encourage a technical and administrative system for generating such identifiers and a system that resolves these identifiers to a set of at least basic information about this digital asset.



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