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# What is a DOI?

- A DOI (Digital Object Identifier) is a unique alphanumeric identifier applied to a specific piece of intellectual property (e.g. copyrighted document), particularly one presented in an online environment -- be that object a book, a scientific paper, a song, an image, or something else.
- A "persistent" identifier, and remains associated with the object irrespective of changes in the object's Web address.
- Almost all Journals articles currently are assigned a DOI.

# DOIs at the EPO


- DOIs are acquired/added for NPL records  
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# Some figures

- 60% of EPO's NPL internally stored NPL records have a DOI (15,6 million)
- In 2016, 24% of EPO's searches cited NPL
- 57% of those NPL citing searches contained DOI'd NPL
- DOIs is the identifying standard: approximately 148 million DOI names assigned to date

# Accessing NPL Citations in practice



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 Claims  
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 Original document  
**Cited documents**  
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 INPADOC legal status  
 INPADOC patent family
 
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**Patents cited in the search report**
☐ 1. System and method for cloud enterprise services
 

★ <b>Inventor:</b> KAMPAS SEAN ROBERT [US] TARKOWSKI ADAM RYAN [US] (+2)	<b>Applicant:</b> ACCENTURE GLOBAL SERVICES LTD [IE]	<b>CPC:</b> G06F9/50 G06F9/5072 G06Q10/06 (+3)	<b>IPC:</b> G06Q10/00	<b>Publication info:</b> EP2439687 (A1) 2012-04-11	<b>Priority date:</b> 2010-10-05
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☐ 2. Automated Deployment of a Configured System into a Computing Environment
 

★ <b>Inventor:</b> BALASUBRAMANIAN SWAMINATHAN [US] MORGAN ROBERT A [US] (+2)	<b>Applicant:</b> BALASUBRAMANIAN SWAMINATHAN [US] MORGAN ROBERT A [US] (+2)	<b>CPC:</b> G06F9/51	<b>IPC:</b> G06F9/44	<b>Publication info:</b> US2014068546 (A1) 2014-03-06 US9645907 (B2) 2017-05-09	<b>Priority date:</b> 2012-08-28
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☐ 3. MODEL DRIVEN DEPLOYMENT OF COMPOSITE APPLICATIONS
 

★ <b>Inventor:</b> BERG DANIEL C [US] BLANCETT BRAD L [US] (+7)	<b>Applicant:</b> IBM [US]	<b>CPC:</b> G06F9/51	<b>IPC:</b> G06F9/445	<b>Publication info:</b> US2011029967 (A1) 2011-02-03 US8595693 (B2) 2013-11-26	<b>Priority date:</b> 2008-07-29
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**Literature cited in the search report**
☐ 4. Toward an architecture for the automated provisioning of cloud services
 

★ <b>Author:</b> Johannes Kirschnick Jose M Alcaraz Caliro Lawrence Wilcock Nigel Edwards	<b>Publication data:</b> IEEE COMMUNICATIONS MAGAZINE, 2010/12/01 IEEE SERVICE CENTER, PISCATAWAY, US	<b>CPC:</b>	<b>Source information:</b> Vol.48 Nr.12,Page(s):124 - 131	<b>Publication info:</b> XP011340437
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XP011340437
<b>Bibliographic data</b>
Description
Claims
Mosaics
Original document
Cited documents
Citing documents
INPADOC legal status
INPADOC patent family

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- [What happens if I click on the "Register" button?](#)
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- [Why do I sometimes find the abstract of a corresponding document?](#)
- [What happens if I click on the red "patent translate" button?](#)
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## Bibliographic data: XP011340437

★ In my patents list

Previous

4 / 4

Next

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### Toward an architecture for the automated provisioning of cloud services

**Page bookmark** [XP011340437 - Toward an architecture for the automated provisioning of cloud services](#)

**NPL reference number:** XP011340437

**Publication date:**

**Author:** Johannes Kirschnick; Jose M Alcaraz Calero; Lawrence Wilcock; Nigel Edwards

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**Patent applicant:**

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Citations1  
Patent  
Citation1568  
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4

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Figures

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Citations

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### Abstract:

The automated provisioning of services in cloud computing presents many challenges. Users can request virtual machines from cloud infrastructure providers, but these machines have to be configured and managed properly. This article describes an architecture that enables the automated deployment and management of the virtual infrastructure and software of services deployed in the cloud. The architecture takes a template description of a service, which encapsulates requirements, options, as well as behavior for a collection of resources and orchestrates the provisioning of this service into a newly created set of virtual resources. The template is used for integrating the deployment and reconfiguration behavior of a service in which logical components are described along with options to scale them and appropriately change their configuration. Services are described through a set of components, which can easily be mapped and remapped to dynamically created resources, letting services take full advantage of flexible cloud resources.

**Published in:** [IEEE Communications Magazine](#) ( Volume: 48, Issue: 12, December 2010 )**Page(s):** 124 - 131**DOI:** [10.1109/MCOM.2010.5673082](#)**Date of Publication:** 23 December 2010 ⓘ**Publisher:** IEEE**Print ISSN:** 0163-6804**Sponsored by:** [IEEE Communications Society](#)

Contents

# If every IP5 Office adopts DOIs...

- Better access to the NPL cited by external users and examiners.
- Most of the NPL available under CCD could be DOI'd.
- External users' NPL requirements would be served to the best possible extent.
- No copyright issues.
- DOIs would also enable standardised NPL data comparisons/exchanges between Offices and could also be used for NPL cited/citing searches:
  - Today citation analysis is usually based on searches of titles.
  - DOIs would remove the fuzzy character of such searches (NPL records are clearly identified).



# Proposal

- Every IP5 to reflect on adding DOIs to its NPL cited records when available.
- Practically, this would mean performing DOI referencing of cited NPL records through CROSSREF.
- Resources are required for referencing automatically and adding a DOI field to the NPL database maintained by Offices. The DOIisation could be limited to the cited NPL.
- EPO is happy to share its experience and practice in this field.
- Feedback could be provided at subsequent IP5 meetings.

**Thank you for your attention!**

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