#### I, David O'Connor, declare as follows:

- 1. I am co-founder, President and CTO of Visual Analytics. I am primarily responsible for the creation of VisuaLinks®, which has become one of the standard data mining applications at a number of intelligence agencies, law enforcement organizations, and financial crime investigative units. I have worked closely with the Financial Crimes Enforcement Network (FinCEN), Internal Revenue Service (IRS, Criminal Investigations), Defense Intelligence Agency, and the Defense Information Systems Agency (DISA).
- 2. I received my B.S. in Computer Science from the University of Maryland and have more than 15 years of experience developing large scale distributed systems, data mining, visualization, and artificial intelligence technologies. I served in the Marine Corps and worked on fighter aircraft electrical flight control systems.
- 3. I submit this declaration in connection with Perfect 10's lawsuit against Google. I have examined Exhibit 1 which is attached to this declaration. In my opinion, I have sufficient expertise in computer science and the Internet to determine whether the various portions of notices attached as Exhibit 1 would provide a search engine such as Google with enough information to locate the infringing image(s) or link(s).
- 4. I assume that page 1 of Exhibit 1 consists of thumbnail images from Google Image Search, along with the three links that Google provides for each such image. Assuming that is the case, page 1 of Exhibit 1 provides more than enough information for Google to locate and block all the URLs listed on page 1. Adobe Acrobat has a feature for the extraction of URLs. Google could copy any of the URLs contained in page 1 of Exhibit 1 into a text file, spreadsheet, or database. The first and third URLs listed on page 1 of Exhibit 1, namely, http://img133.imagevenue.com/loc173/th\_64278\_21.jpg, and http://tbn0.google.com/images?q=tbn: Vs0bIZd\_jqxVPM: http://img133.

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imagevenue.com/loc173/th\_64278\_21.jpg, both provides Google with sufficient information to locate the image, with or without the image itself. The middle Web Page URL (http://forum.phun.org/showthread.php?p=729907) with the model name is sufficient to locate the image as well, but having a copy of the image as shown also helps. In general, having copies of the images as provided in Exhibit 1 would help, rather than hinder, the search engine or ISP in locating the infringing material. Google should be able to readily find all copies of that image in any of its search results, and remove them from its index.

5. I have examined pages 2 through 8 of Exhibit 1. If Google received any of those pages in a notice, it would have enough information to locate the images on that page, and remove the images and the webpage from both its Image Search and Web Search results. To locate and remove the infringing material, Google should need only the Web Page URL, which is contained on each of those pages. Once Google has the URL of the Web Page containing an infringement, it can find that Web Page, and it can prevent any Google Search Results, whether Web Search or Image Search results, from directly linking to that web page. On pages 3-6, the Web Page URL is highlighted. On page 5, Google has suppressed the starting http:// from appearing on the user's screen but it can still locate the infringing webpage with that portion of the URL simply by searching its index. On page 7, the Web Page URL appears in the browser bar. On page 8, I am assuming that the highlighted URL identifies the web page directly above it. Google could certainly block the highlighted URL and could use the highlighted URL to determine if the corresponding web page is as shown on page 8. For page 2, Google has the search term, "Ingrid Ostvat", the base URL of the website where each image is located, darkshadow.3xforum.ro, and the "Thumbnail Source URL." This URL is displayed in the address bar of a web browser when a user clicks on the thumbnail. Page 9 of Exhibit 1 has an example of a Thumbnail Source URL. The Thumbnail Source URL contains both the "See full-size image" URL as well

as the Web Page URL embedded in it, along with information regarding the search, such as whether the user had their safe search on and what browser they were using. This URL may be easily extracted using Adobe's URL extraction feature, as demonstrated on page 10 of Exhibit 1. On page 10, the first highlighted term is the "See full-size image" URL. The second highlighted term is the Web Page URL.

6. The URLs on the left side of page 11 of Exhibit 1 appear to be Web Page URLs with the starting http:// and/or www. removed. If that is the case, Google can use those URLs (by either putting them into Google's search box, or by searching its index for URLs that contain those URLs), to locate the associated web pages. It can then prevent either its Image Search or its Web Search results from directly linking to those web pages. Google can do this without any of the other information shown in the middle and right hand columns of page 11. I know this not only because of my knowledge regarding how search engines operate, but also because I am able to do that myself by removing the starting http:// and or www. from a URL I obtained from Google's Web Search results, and then putting it into Google's Web Search box.

I declare that the foregoing is true and correct to the best of my knowledge and based on all information as of the date provided below.

Executed on June 16, 2009,

David O'Connor

## Exhibit 1

#### **GOOGLE I mages**

#### 51 results for "Xenia Szabo"

7/8/2008

1



Search string: "Xenia Szabo" <a href="http://img133.imagevenue.com/loc173/th\_64278\_21.jpgSite">http://img133.imagevenue.com/loc173/th\_64278\_21.jpgSite</a> <a href="http://forum.phun.org/showthread.php?p=729907">http://forum.phun.org/showthread.php?p=729907</a> Image Info: 106x160 Size: 7Kb

Thumbnail <a href="http://tbn0.google.com/images?q=tbn:Vs0bIZd\_jqxVPM:http://img133.imagevenue.com/loc173/th\_64278\_21.jpg">http://tbn0.google.com/images?q=tbn:Vs0bIZd\_jqxVPM:http://img133.imagevenue.com/loc173/th\_64278\_21.jpg</a>

2



Search string: "Xenia Szabo"Image <a href="http://www.imagerise.com/images.php/">http://www.imagerise.com/images.php/</a> t4766\_XeniaSzabo22.jpgSite <a href="http://titsandhentai.wordpress.com/2008/04/16/xenia-szabo/">http://titsandhentai.wordpress.com/2008/04/16/xenia-szabo/</a> Image Info: 99x150 Size: 6Kb

Thumbnail <a href="http://tbn0.google.com/images?q=tbn:MYCIndOeHiRYpM:http://www.imagerise.com/images.php/">http://tbn0.google.com/images?q=tbn:MYCIndOeHiRYpM:http://www.imagerise.com/images.php/</a> t4766\_XeniaSzabo22.jpg

3



Search string: "Xenia Szabo"Image <a href="http://www.imagerise.com/images.php/">http://www.imagerise.com/images.php/</a> t4755\_XeniaSzabo01.jpgSite <a href="http://titsandhentai.wordpress.com/2008/04/16/xenia-szabo/">http://titsandhentai.wordpress.com/2008/04/16/xenia-szabo/</a> Image Info: 99x150 Size: 6Kb

Thumbnail <a href="http://tbn0.google.com/images?q=tbn:YSICEWI5K6tg6M:http://www.imagerise.com/images.php/t4755\_XeniaSzabo01.jpg">http://tbn0.google.com/images?q=tbn:YSICEWI5K6tg6M:http://www.imagerise.com/images.php/t4755\_XeniaSzabo01.jpg</a>

4



Search string: "Xenia Szabo"Image <a href="http://img11.imagevenue.com/loc229/th\_16866\_01.">http://img11.imagevenue.com/loc229/th\_16866\_01.</a> jpgSite <a href="http://www.sztar.com/showthread.php?p=1367574ImageInfo">http://www.sztar.com/showthread.php?p=1367574ImageInfo</a>: 106x160 Size: 7Kb

Thumbnail <a href="http://tbn0.google.com/images?q=tbn:kSvskXqpK00tXM:http://img11.imagevenue.com/loc229/th\_16866\_01.ipg">http://tbn0.google.com/images?q=tbn:kSvskXqpK00tXM:http://img11.imagevenue.com/loc229/th\_16866\_01.ipg</a>

5



Search string: "Xenia Szabo"Image <a href="http://blog7.fc2.com/a/aitaine/file/20060525.jpg">http://blog7.fc2.com/blog-date-200605.htmlImage Info: 300x451 Size: 49Kb</a>

Thumbnail http://tbn0.google.com/images?q=tbn:zfMv2sApk-Kw4M:http://blog7.fc2.com/a/aitaine/file/20060525.jpg



"Ingrid Ostvat"

Advanced Image Search

**Images** 

Showing: All image sizes

Any content

All colors ▼

Results **19 - 36** of about **130** (0.04 seconds)



PERFECT10 com - The World s Most ... 99 x 150 - 7k - jpg darkshadow.3xforum.ro



PERFECT10 com - The World s Most ... 99 x 150 - 6k - jpg darkshadow.3xforum.ro



PERFECT10 com - The World s Most ... 99 x 150 - 5k - jpg darkshadow.3xforum.ro



PERFECT10 com - The World s Most ... 99 x 150 - 4k - jpg darkshadow.3xforum.ro



PERFECT10 com - The World s Most ... 99 x 150 - 5k - jpg darkshadow.3xforum.ro



PERFECT10 com - The World s Most ... 99 x 150 - 5k - jpg darkshadow.3xforum.ro



PERFECT10 com - The World s Most ... 99 x 150 - 4k - jpg darkshadow.3xforum.ro



PERFECT10 com - The World s Most ... 99 x 150 - 6k - jpg darkshadow.3xforum.ro



PERFECT10 com - The World s Most ... 99 x 150 - 5k - jpg darkshadow.3xforum.ro



PERFECT10 com - The World s Most ... 99 x 150 - 6k - jpg darkshadow.3xforum.ro



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PERFECT10 com - The World s Most ... 99 x 150 - 5k - jpg darkshadow.3xforum.ro



PERFECT10 com - The World s Most ... 99 x 150 - 4k - jpg darkshadow.3xforum.ro



PERFECT10 com - The World s Most ... 99 x 150 - 6k - jpg darkshadow.3xforum.ro



Exh. 1, Pg. 2

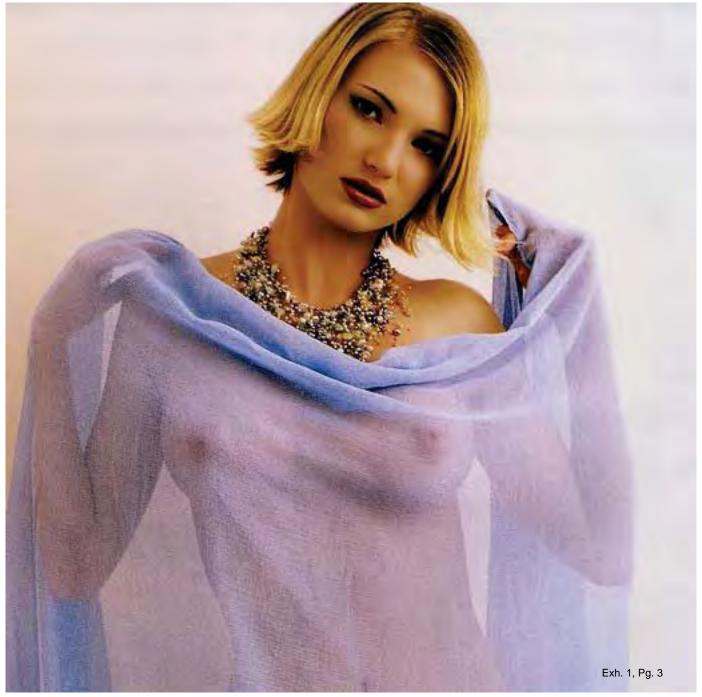
This is Google's cache of <a href="http://www.monitor.hr/belle/0112/011206.htm">http://www.monitor.hr/belle/0112/011206.htm</a>. It is a snapshot of the page as it appeared on 16 Sep 2008 18:14:02 GMT. The <a href="current page">current page</a> could have changed in the meantime. Learn more

#### **Text-only version**

These search terms are highlighted: zoya konyieva

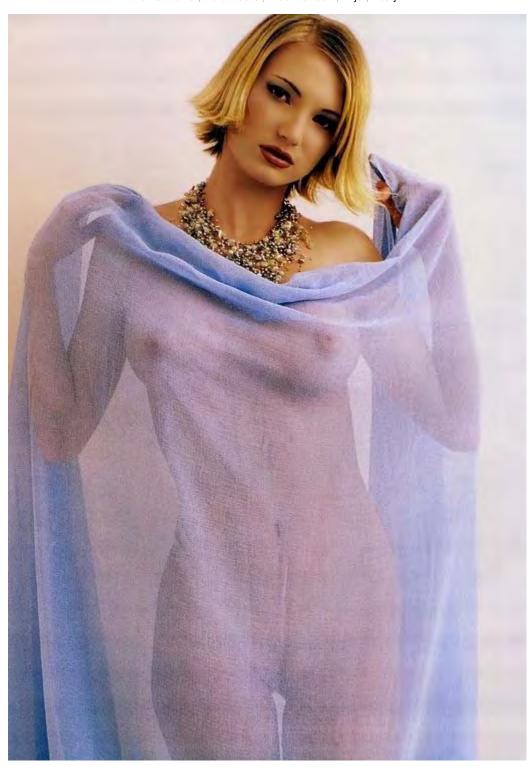
### Zoya Konyieva

Monitor home | Belle indeks | Prosinac 2001 | Prije | Poslije

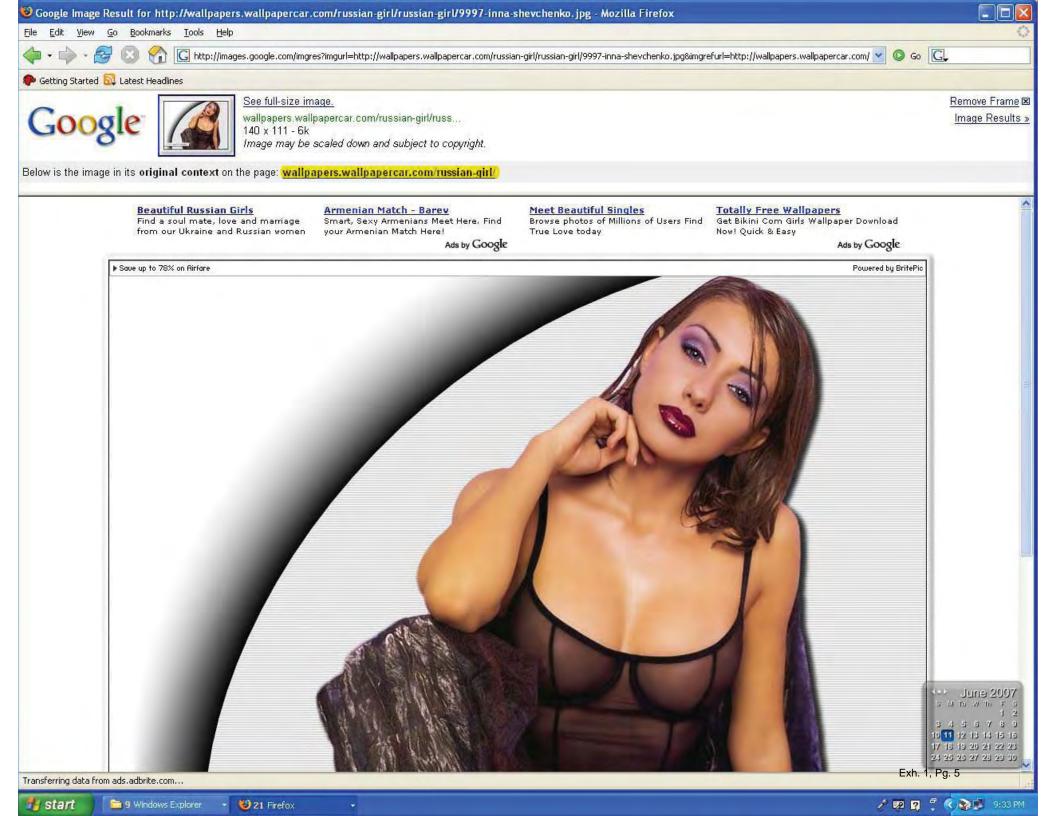


 $http://209.85.173.104/search?q = cache: PZ9sXJumAyoJ: h...site \% 3 Amonitor hr + \% 22Zoya + Konyieva \% 22\&hl = en\&ct = clnk \ (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + Konyieva \% 22\&hl = en\&ct = clnk \ (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + Konyieva \% 22\&hl = en\&ct = clnk \ (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + Konyieva \% 22\&hl = en\&ct = clnk \ (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + Konyieva \% 22\&hl = en\&ct = clnk \ (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + Konyieva \% 22\&hl = en\&ct = clnk \ (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + Konyieva \% 22\&hl = en\&ct = clnk \ (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + Konyieva \% 22\&hl = en\&ct = clnk \ (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + Konyieva \% 22\&hl = en\&ct = clnk \ (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + Konyieva \% 22\&hl = en\&ct = clnk \ (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + Konyieva \% 22\&hl = en\&ct = clnk \ (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + Konyieva \% 22\&hl = en\&ct = clnk \ (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + Konyieva \% 22\&hl = en\&ct = clnk \ (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + Konyieva \% 22\&hl = en\&ct = clnk \ (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + Konyieva \% 22\&hl = en\&ct = clnk \ (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + Konyieva \% 22\&hl = en\&ct = clnk \ (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + Konyieva \% 22\&hl = en\&ct = clnk \ (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + Konyieva \% 22\&hl = en\&ct = clnk \ (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + Konyieva \% 22\&hl = en\&ct = clnk \ (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + Konyieva \% 22\&hl = en\&ct = clnk \ (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + (1\ of\ 2)10/28/2008\ 5:14:58\ AMonitor\ hr + \% 22Zoya + (1\ of\ 2)10/28/20$ 

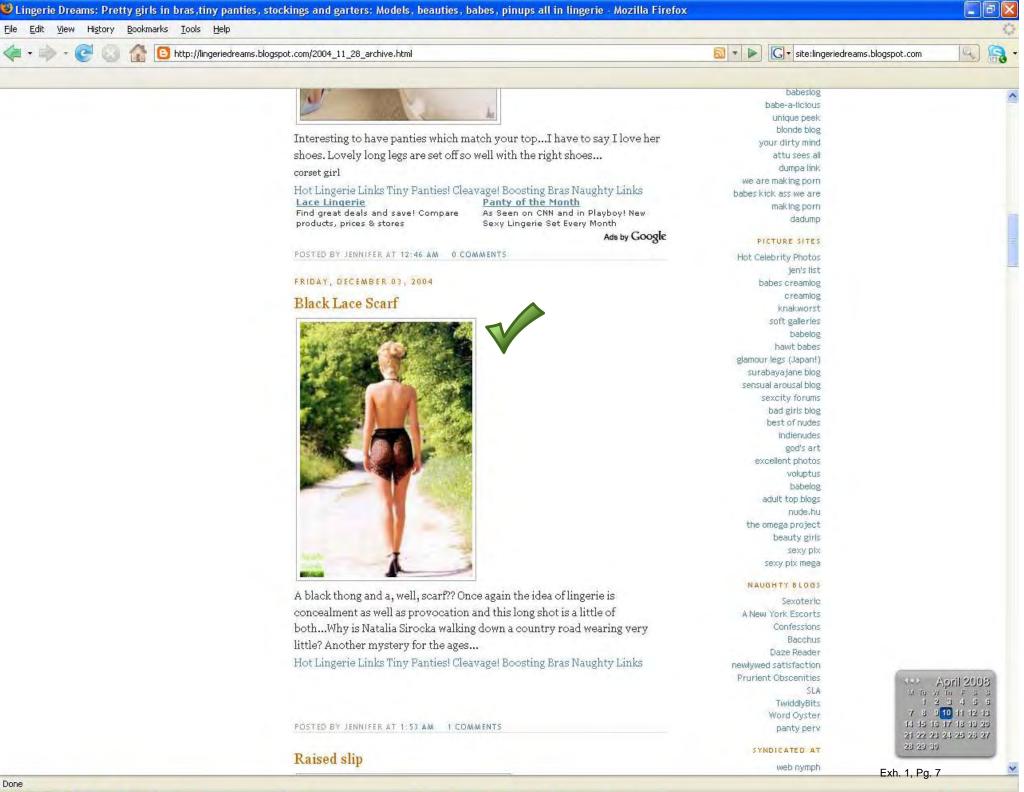
# Zoya Konyieva Monitor home | Belle indeks | Prosinac 2001 | Prije | Poslije



Monitor home | Belle indeks | Prosinac 2001 | Prije | Poslije







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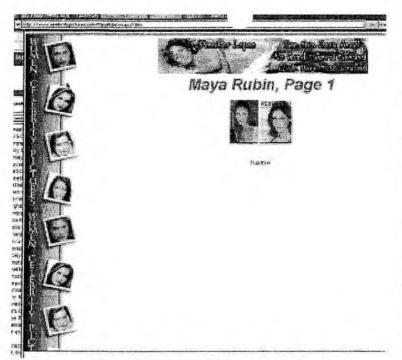








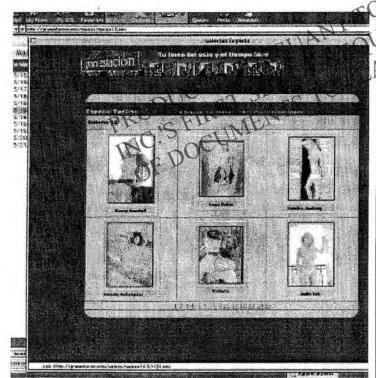




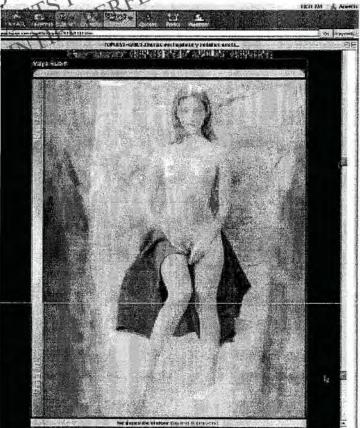
http://www.celebritypictures.com/MayaRubin/maya1.htm



http://www.celebritypictures.com/Pictures/MayaRubin/maya2.jpg

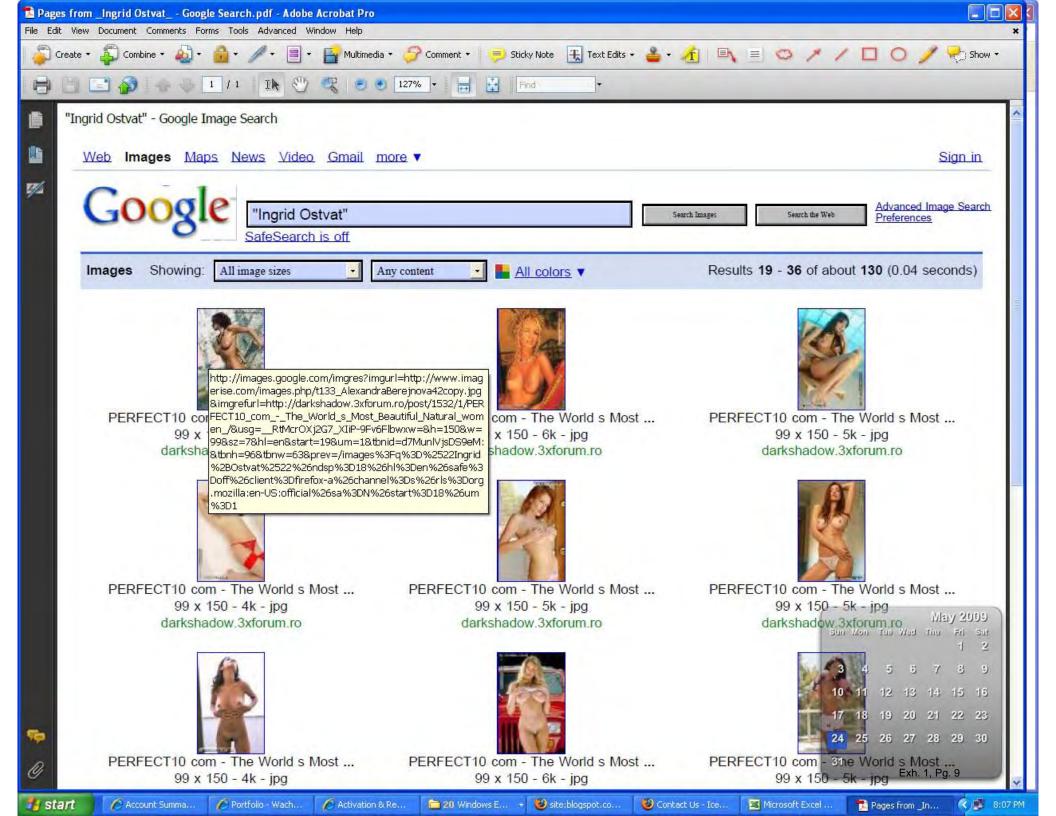


http://granestacion.com/topless/topless13.htm



http://granestacion.com/topless/topless/t13/t131.htm

#### CONFIDENTIAL



http://images.google.com/imgres?imgurl=http://www.imagerise.com/images.php/t133\_AlexandraBerejnova42copy.jpg&imgrefurl=http://darkshadow.3xforum.ro/post/1532/1/PERFECT10\_com\_- The\_World\_s\_Most\_Beautiful\_Natural\_women\_/&usg=\_\_\_

RtMcrOXj2G7\_XIiP-9Fv6Flbwxw=&h=150&w=99&sz=7&hl=en&start=11&um=1&tbnid=d7MunlVjsDS9eM:&tbnh=96&tbnw=63&prev=/images%3Fq%3Dsite:www.imagerise.com%2B%2522Ingrid%2BOstvat%2522%2Bdarkshadow.3xforum.ro%26hl%3Den%26safe%3Doff%26client%3Dfirefox-a%26channel%3Ds%26rls%3Dorg.mozilla:en-US:official%26um%3D1

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INFRINGING URL	GOOGLE SEARCH	PERFECT 10 MAGAZINE ISSUE OR WEBSITE
	natalia sirocka	vol 3, no 3, p 14-21
	natalia sirocka	vol 3, no 3, p 15
	natalia sirocka	vol 3, no 3, p 14-21
	natalia sirocka	vol 3, no 3, p 15
	natalia sirocka	vol 3, no 3, p 17
antoninos net/Ton model/ton model/14 htm	natalia sirocka	vol 3, no 3, p 14 - 21
freebabes.nl/thumbnails.asp?categorie=141&categorietxt=Natalia+Slrocka	natalia sirocka	
freeones.com/html/n links/Natalia Sirocka.shtml	"natalia sirocka"	vol 3, no 3, p 14 - 21
paparazziporn.com/natalias/natalia.htm	"natalia sirocka"	vol 1, no 6 p 50 - 55
russiancelebrities.org/ rclSet.asp?GID=4&PID=494&SID=1	"natalia sirocka"	vol 3, no 3, p 14 - 21
minovia.com/modules/uskolaxgallery/ famosas.php?carpeta=natalia_sirocka	"natalia sirocka"	vol 1, no 6 p 50 - 55
1024x768wallpapers.com/categories.php?cat_id=665	"natalia sirocka"	
ragazzesexy.tv/images.cgi?direct=Varie_Straniere_2/Natalia_Sirocka	"natalia sirocka"	vol 3, no 3, p 14 - 21
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	'natalia sirocka''	
celebs.jerkengine.com/FD/ Browse/Main?letter=N&type=image	natalia sirocka"	vol 3, no 3, p 14 - 21
miss.mgn.ru/gallery/cat.asp?iCat=25	"natalia sirocka"	vol 3, no 3, p 14 - 21
playboy.fason.ru/model.php	"natalia sirocka"	vol 3, no 3, p 14 - 21
sultan14416.supereva.it/ nataliasirocka/nataliasirocka.htm	"natalia sirocka"	
pix.alronix.net/Photo_Scans/ Tits/Natalia_Sirocka/pic00097.htm	"natalia Sirocka"	vol 3, no 3, p 14 - 21
greh.ru/foto/bysi/	"natalia Sirocka"	vol 3, no 3, p 14 - 21
minovia.com/modules/ uskolaxgallery/famosas.php?muestrame=n	"natalia Sirocka"	vol 3, no 3, p 14 - 21
russiancelebrities.org/ rclSet.asp?GID=4&PID=493&SID=1	"natalia Sirocka"	vol 3, no 3, p 14 - 21
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pix.alronix.net/Photo_Scans/Fashion/Nataskia_Maren	nataskia maren	vol1, no 4, p 14
minovia.com/modules/uskolaxgallery/famosas.php?carpeta=nataskia_maren	nataskia maren	vol 1, no 4, p 15
celebsxposed.net/preview/preview2.html	nataskia maren	vol 1, no 4, p 12 - 19
all-nude-celebrities-free.com/celebrities/n.html	nataskia maren	vol 2, no 6, p 6
models.ksenia.com/	nataskia maren	vol 1, no 5 p 34
delebs.jerkengine.com/FD/ Browse/Main?letter=N&type=image	"nataskia maren"	vol 1, no 4, p 12 - 19
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	"nataskia maren"	vol 2, no 6, p 6