



Crystal Semantics
semantic advertising solutions

Crystal Semantics overview



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*Crystal Semantics' **semantic advertising and brand safety platform** automatically categorizes, classifies and extracts concepts from Web content in real-time with **greater than 94% accuracy**, enabling **Real-Time Bidding** and delivery of highly-relevant advertising that achieves **significant campaign CTR / effective CPM increases** compared to keyword-based targeting methods (e.g. AdSense)*



- ❄ Founded in 2001, based in London and Copenhagen, spin-out of ad pepper media International N.V
- ❄ FY2012/13 revenue \$3.2M
- ❄ Professor David Crystal, recognized expert in linguistics and semantic classification, remains active member of team in advisory role
- ❄ IP represents 435 man-year, \$44.3M R&D investment
- ❄ US & UK patents for 'Apparatus for classifying or disambiguating data'

A M E D I S
M E D I A

MEDIACOM
People First ▶ Better Results

MINDSHARE



OmnicomGroup

WPP

Problem Overview



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Low
Relevance

Want to grill like an expert?
Learn more about Kingsford® Competition Briquets and get expert grilling techniques with these instructional videos from Chris Lilly. Watch now!

Created: Friday, April 17, 2009 12:52 p.m. CDT

Couple gets prison for grilling toddler

DETROIT — A Detroit couple accused of trying to cremate their dead 2-year-old son on a barbecue grill, and then hiding the remains while collecting welfare benefits for the child, were both sentenced to prison Thursday.

Nickella Reid, 23, pleaded guilty in March in Wayne County Circuit Court to involuntary manslaughter and welfare fraud in connection with the death of her son, Dourty Miller. She was sentenced Thursday by Judge Michael Cashman to 10 to 15 years.

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Print this story
Share

ANN.com / LAW CENTER

Court challenge to order on brain-damaged woman expected this week

Husband to appear on 'Larry King Live'

(CNN) — The husband of a brain-damaged Florida woman at the center of a bitter right-to-life battle is expected to file a legal challenge to Florida Gov. Jeb Bush's order reinserting a feeding tube into the woman.

Michael Schiavo plans to argue in court that Bush's order that led to Terri Schiavo's feeding tube being reinserted is unconstitutional. The challenge is expected to be filed by Wednesday, CNN's Susan Cantello reported.

Meanwhile, Michael Schiavo will appear in an exclusive interview on CNN's "Larry King Live" on Tuesday.

Hey genius, answer this

What is your IQ?

PutYourFeetUp.com

CNN.com / crime

Sixth severed foot surfaces off Canadian coast

STORY HIGHLIGHTS

- At least the sixth foot since August that have surfaced off Canadian shore
- The latest foot showed up in a shoe, authorities say
- It could take weeks or months to use DNA science to identify the body parts
- Mystery has garnered attention around the world

(CNN) — A severed foot — the sixth in 11 months — washed up on the shore of a Canadian island on Wednesday, police said.

The right foot was found by a local woman walking on the beach, said Sgt. Mike Trivette of the Royal Canadian Mounted Police in the town of Campbell River on Vancouver Island, British Columbia.

"A local citizen walking on a beach in Tyea Spit discovered what appears to be the human remains of a

Looking for a real travel deal?

Over 250 sick after eating at Indiana Olive Garden

LOS ANGELES (Reuters) — More than 250 people have reported becoming sick after eating at an Olive Garden restaurant in Indianapolis, Indiana, a county health official said on Friday, a day after an outbreak of E. coli at Taco Bell restaurants was declared over.

The news makes Olive Garden at least the third U.S. restaurant chain this month to be linked to widespread customer illnesses.

Some customers who ate at the Olive Garden restaurant in northeast Indianapolis between December 9 and December 13 have reported nausea, vomiting, diarrhea, and in some cases fever, said John Althoff, a spokesman for the Marion County Health Department.

Three of those people have been hospitalized.

Tests of the sick people's stool and leftovers they took home from the restaurant will be

FREE Dinner for Two at Olive Garden

Click Here!

Leaked video details friendly fire kill

By PAULEY DODDS, Associated Press Writer
Tue Feb 9, 6:27 PM ET

LONDON — A leaked cockpit video published Tuesday captures a dramatic exchange between two American pilots whose voices choke up when they learn they have killed a British soldier in Iraq.

"The going to be sick," one pilot says, later adding "we're in jail, dude."

Ever since the friendly fire incident nearly four years ago, the Pentagon has said the video was classified. That made the footage could not be presented in open court during a British inquest into the death of Lance Cpl. Marty PFC, who was killed when at least one U.S. jet fired on his convoy in the southern city of Basra.

But after excerpts of the video were published in The Sun newspaper and the footage was widely broadcast, U.S. authorities agreed to release it for the inquest.

Neither pilot from the Boise, Idaho-based 100th Fighter Squadron was disciplined in the U.S. military's own investigation, which concluded the pilots "followed the procedures and processes for engaging targets," Pentagon spokesman Bryan Whitman said Tuesday.

The leaking of the tape strained relations between the Department of Defense and the British government, who were previously given a DVD of the classified video.

YAHOO! NEWS

Most Popular

Coffee Might Trigger First Heart Attack in Some

(CNN) — It might be a bad idea to drink coffee every day, a new study says.

TUESDAY, Aug. 18 (HealthDay News) — An occasional cup of coffee might trigger first heart attacks in some people, a new study suggests.

Most Emailed News

Home sales decline in 28 states, D.C.

WASHINGTON: The slowdown in the increasingly housing market is spreading, with 28 states and the District of Columbia reporting falling sales declines, led by big drops in the hot-bout areas of Virginia.

ADVERTISMENT

Folgers Simply Smooth Enjoy a Second Cup

Limited
Insights

Brand
Damage

Poor
Response

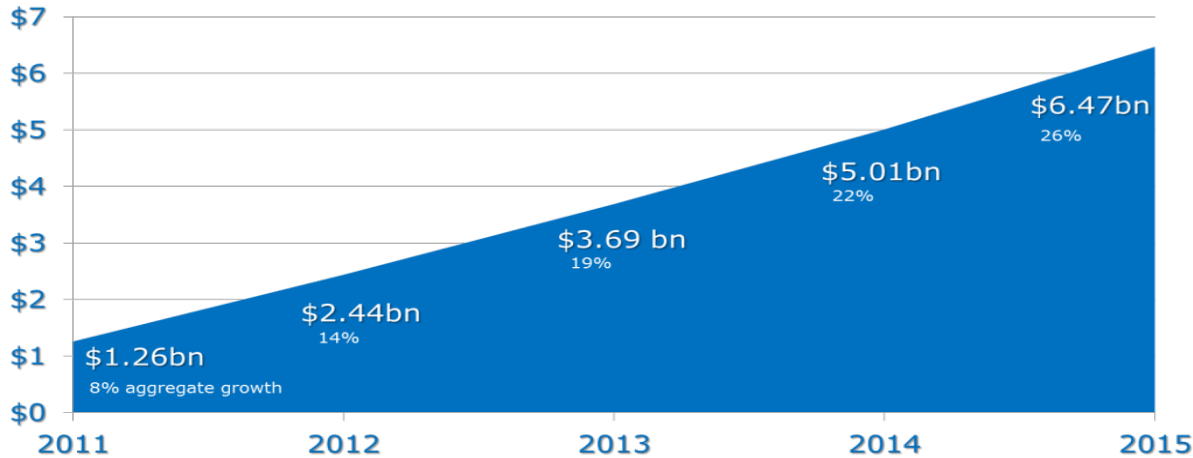
Big data problem



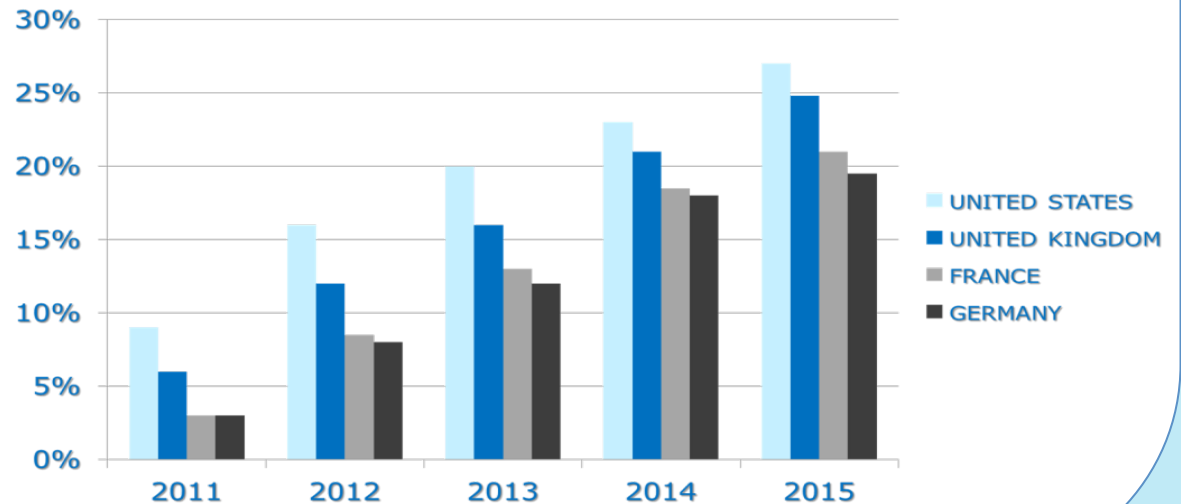
Why online advertising?



RTB SHARE OF TOTAL DISPLAY AD SALES FOR US,UK,FRANCE & GERMANY 2011-2015



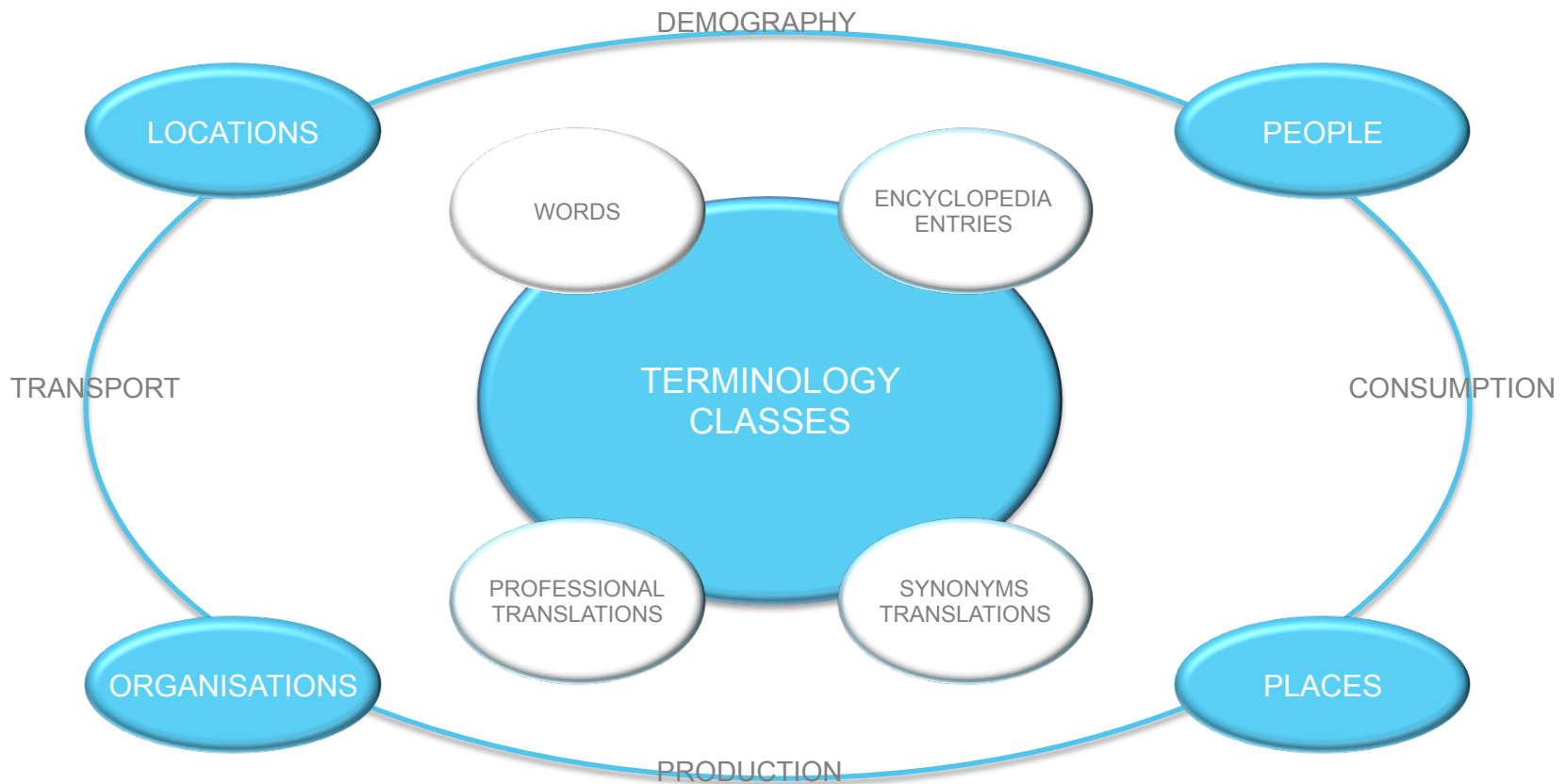
RTB AD SALES AS A SHARE OF TOTAL DISPLAY AD SALES 2011- 2015



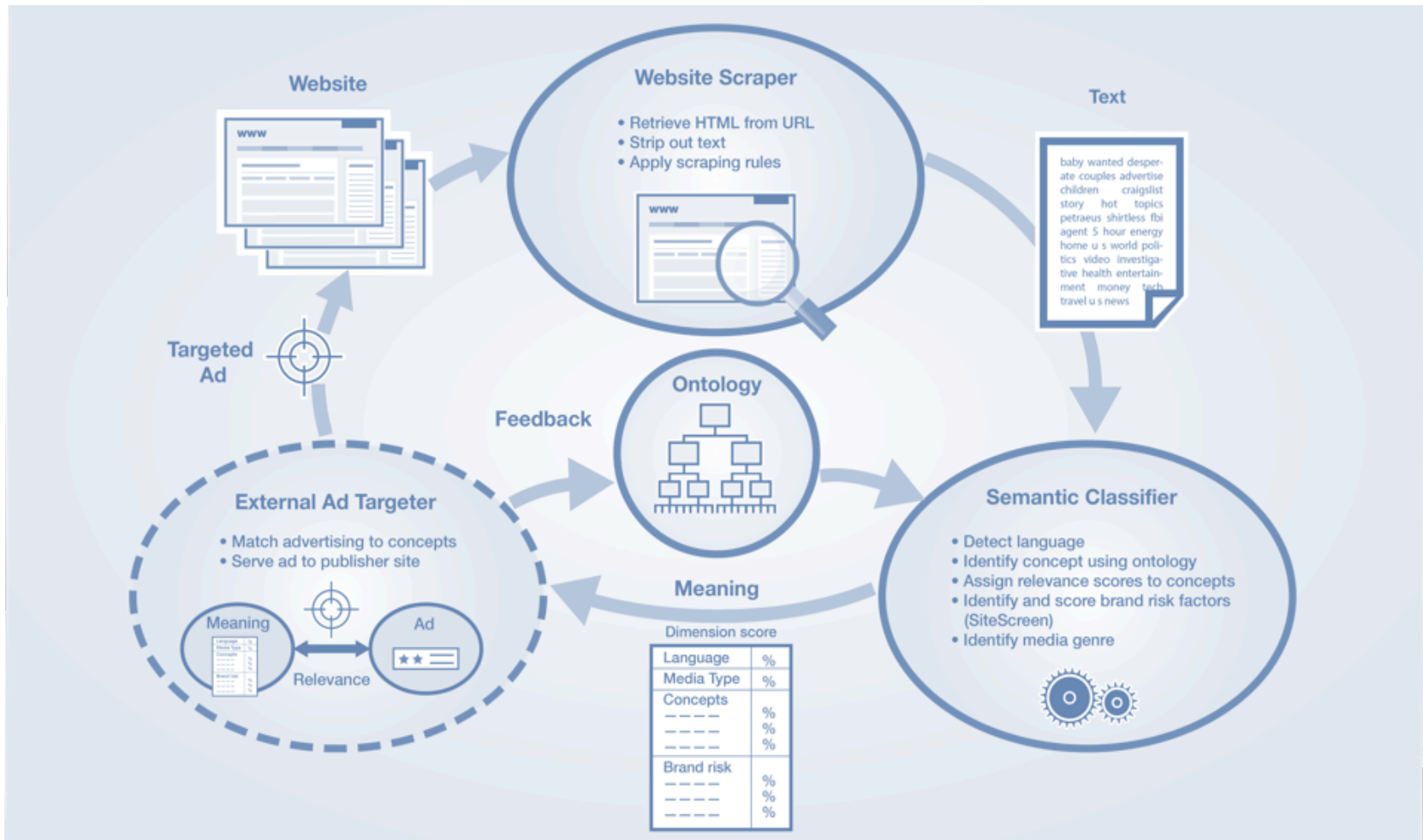
Global Data Model



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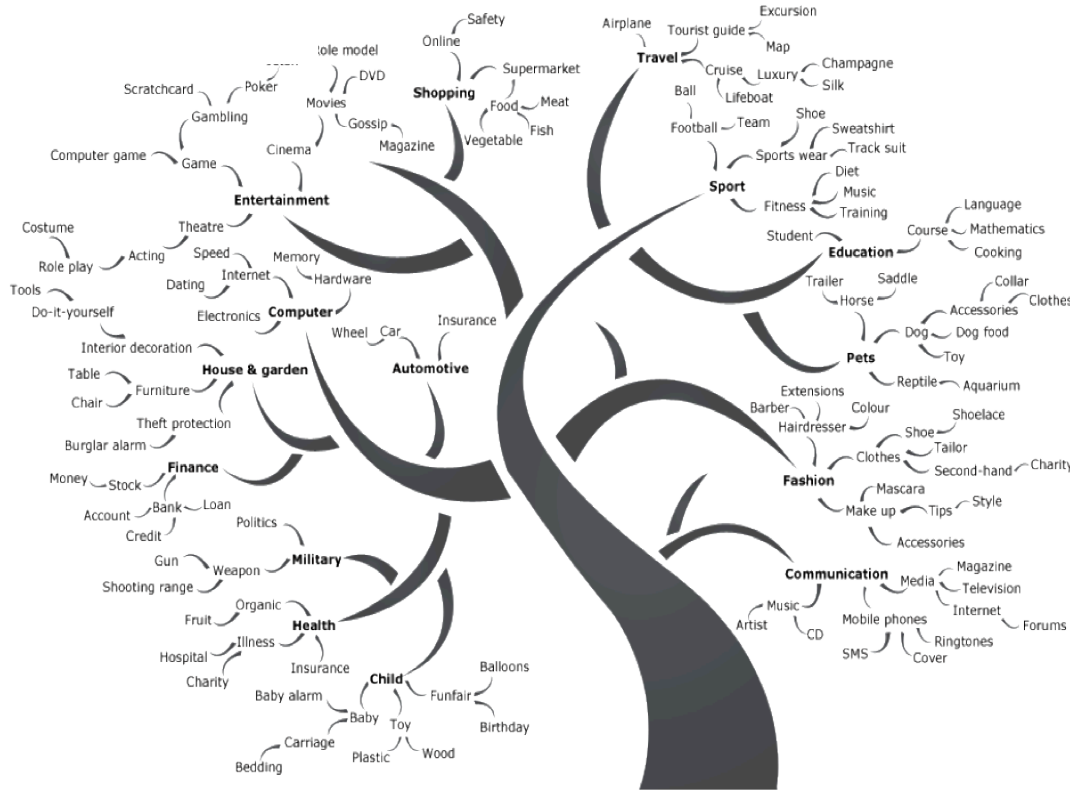


Process





Sense Engine™ Taxonomy



In 12 languages

- ❄ English
- ❄ French
- ❄ German
- ❄ Dutch
- ❄ Danish
- ❄ Spanish
- ❄ Italian
- ❄ Finnish
- ❄ Swedish
- ❄ Norwegian
- ❄ Portuguese
- ❄ Turkish

- Language
- Category
- Media Genre
- Sentiment
- Brand unsafe content
- & other data points





Theme: Travel to Mexico

The screenshot shows the BBC Travel website. The main article is titled "Beyond Cancun: A quieter Mexico" by Amy Mulcair, dated 13 January 2011. The article text is partially visible, mentioning Cancun's beaches, happy hours, and cruise ships. A related article link for "Cancun and the Riviera Maya: The perfect long weekend" is also shown. An advertisement for Marriott Hotels & Resorts is visible on the right side of the article.

Scanned content:

in **mexico beaches** 13 january 2011 by amy mulcair a view from the **mayan ruins** in **tulum** amy mulcair **cancun** is infamous for its beaches and happy hours **cruise ships** and an all you can eat brand of **tourism** but it can also be viewed as a useful gateway to get beyond the mass tourism and experience a more authentic side of **mexico** related article **cancun** and the **riviera maya** the perfect long weekend the airport has easy and frequent shuttle service to alternative destinations such as **playa del carmen** and **tulum** where you can be on a crowd free beach

Theme: Pregnancy and birth

The screenshot shows the Sun newspaper website. The main article is titled "Breast is not best" by Emma Morton, dated 14 Jan 2011. The article text is partially visible, mentioning breast-feeding exclusively for six months. A sidebar on the left lists various categories like "WOMAN", "Beauty", "Fashion", etc. An advertisement for "All you can eat" is visible on the right side of the article.

Scanned content:

breast feeding exclusively for six months is not necessarily best and may put **babies** off some foods a study warns it could also cause **iron deficiency** and increase chances of allergies the study contradicts **department of health** advice issued in 2003 on the basis of a **world health organisation** report but now experts led by a **paediatrician** from university college london s **institute of childhealth** say **breast feeding** exclusively for six months may damage a **babys health** and reduce the window for introducing new tastes

Avoiding damaging placement



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The night of **scandal** in Genoa. 400 Serbian **hooligans** threw **fireworks**, torches and **smoke bombs**. "Only with a **kalashnikov** would we have been able to **get this under control**," said Italian official Marcello Nicchi. The Serb is apparently the hatchet man for a **right-wing extremist fan group of Red Star Belgrade (Ultra Boys)**. At least **16 people were injured**. The police arrested **17 rioters**.

Screening content






The screenshot shows a news article titled "Platini, Blatter condemn Serbian hooligans" from Reuters, dated 19:40 CET 13/10. The article includes a photo of a person in a balaclava throwing fireworks. The text discusses the condemnation of Serbian hooligans by UEFA and FIFA, and mentions the Red Star Belgrade Ultra Boys fan group. The article is overlaid with several advertisements:

- Top Right:** "With My NoComment, capture the action and be a No Comment TV reporter." featuring a "No Comment | TV" logo by euronews.
- Right Side (Selected Video):** "LE MAG 'Anticipation' for young artists" with a video thumbnail.
- Bottom Right:** "no comment TV" with the website "www.youtube.com/nocommenttv".
- Bottom Right (Podcast):** A "Podcast" ad with a thumbnail image.
- Bottom Right (Currently On Air):** A list of programs: BUSINESS : 09, SPORT : 14, LE MAG : 17, CINEMA : 21, NEWS : 30.
- Bottom Right (No Comment):** A "No Comment" ad with a thumbnail image.

Below the article, there is a blue arrow pointing to the right, and a "Screening content" label in a blue box.



Campaign Performance Optimization

| Customer | Target Audience | iSense Performance |
|---|---|--|
|  | Tech savvy, ABC1, early adopters, male predominant | CTR of 1.1% vs. 0.15% for search advertising (700% higher); CPA 300% lower |
|  | CXOs and BDMs | CTR of 2.6% vs. 0.4% for search advertising (650% higher) |
|  | Tailor-made categories specific to each artist | CTR 500% higher than competing keyword-based targeting solutions |
|  | Hybrid car owners, green / environmentally friendly, checking out competitors | CTR 600% higher than competing keyword-based targeting solutions |
|  | Highly-specific interests such as 'quit smoking', 'cholesterol' | CTR 500% higher than competing keyword-based targeting solutions |



Value Proposition

STRATEGIC

- Lead in ad targeting / relevance; own most accurate semantic context classification tech. in the industry
- Contextually decode, evaluate entire Media Network / Ad Exch. inventory to optimize targeting, monetization
- Offer industry-leading intelligent brand protection far more scalable than rules and white / black listing

COMPETITIVE

- Deliver most relevant inventory and precisely targeted ads with >94% contextual classification accuracy
- Enhance remessaging, behavioral and category targeting with real-time context classification
- Roll out cookie-less context-based targeting / content analysis at scale, 100% compliant with privacy laws

INTELLECTUAL PROPERTY

- Pure linguistics-based hierarchical model of >1M concepts, 4M words in 3,800+ thematic categories
- Patented algorithm disambiguates word senses in multiple languages with greater than 94% accuracy
- Architected for massive scalability; leverages global content delivery networks for <5ms response time

MONETIZATION

- Increase advertising ROI / eCPM via enhanced visibility of audience, greater relevance and better optimization
- Grow Ad Exchange customer base via enhanced real-time bidding precision, automated brand protection
- Price-optimize inventory faster, more effectively via automated fine-grained classification



Thank you

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