

User Innovation with Open APIs: Profiting from Mashups

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Agenda

1. A better mousetrap?
2. User innovation: a new way to create value
3. Open APIs: exploiting participation
4. Toward e-business mashups
5. Lessons learned

1. A better mousetrap?

- “When you build a better mousetrap, they will beat a path to your door” (attributed to Emerson)



Classic



Ultra

Look again ...

- Need to change the way we build mousetraps
- Don't focus on the types of mousetraps we know how to build best (traditional approach):

“Need a better mousetrap” – electric power harpoon

- Create new kinds of mousetraps that we did not anticipate (user-driven innovation approach)

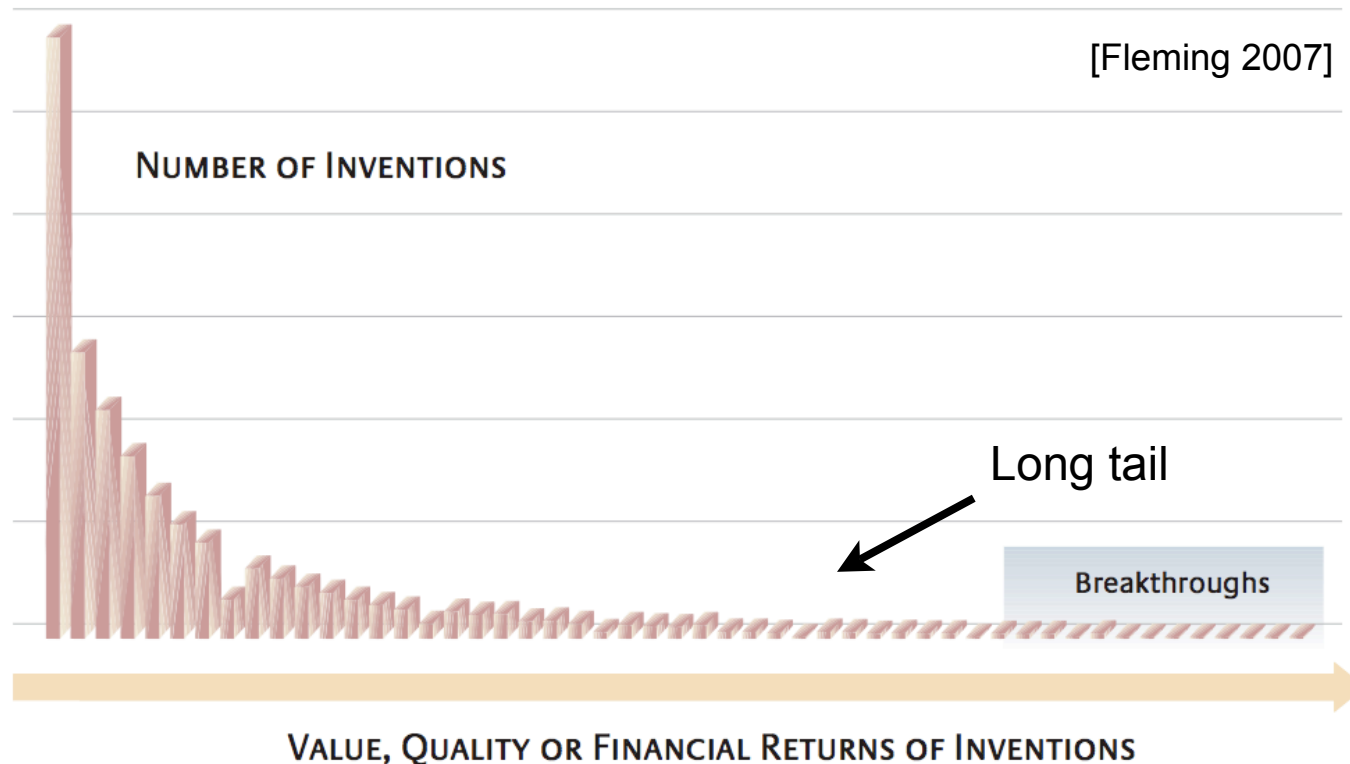
“There are mice in the house” – get a cat, move

Innovation challenges (1)

- Understanding customer needs is a costly and inexact process: even if they know what they want, they often cannot transfer that knowledge to us
- With increasing customization, costs can spiral out of control if you try to respond to markets of one
- That is what happened to ASPs, and it happened to many traditional design-intensive companies

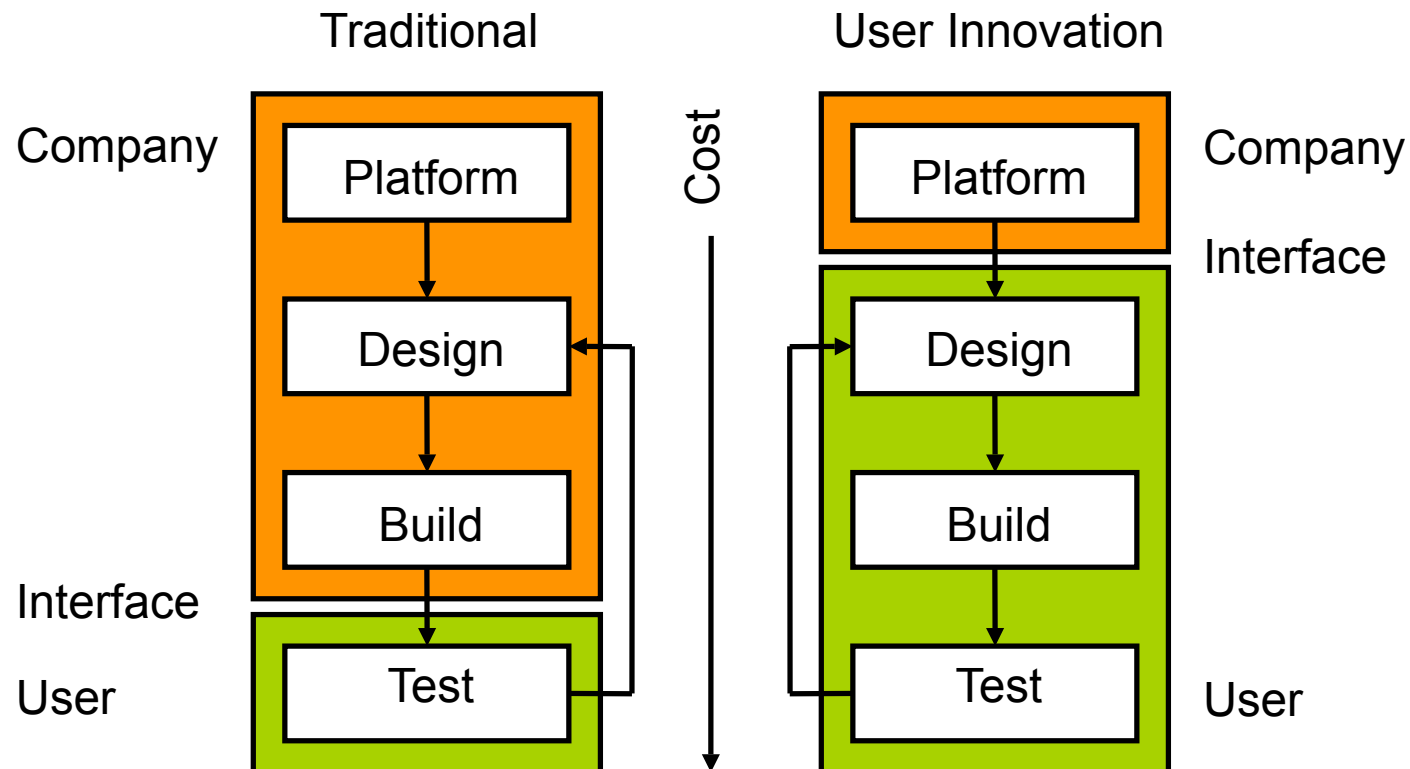
Innovation challenges (2)

- Few innovations are true breakthrough innovations: most innovations create very little value



2. User innovation

- Equip users with tools to build their own products (custom modules or even full applications)



3. Open APIs: exploiting participation

- An open API allows anybody to access the data or services of a platform
- A mashup is an application that combines data or services obtained from multiple open APIs

API 1



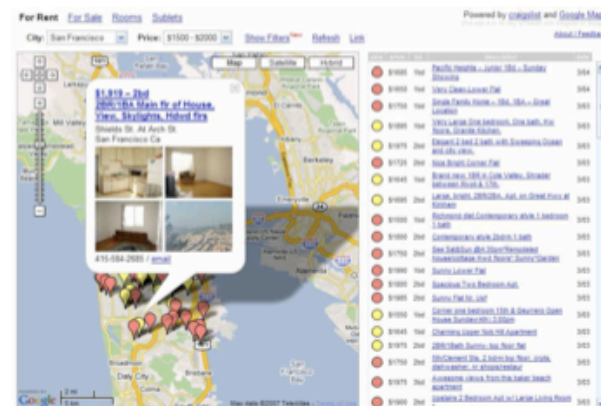
API 2



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Mashup

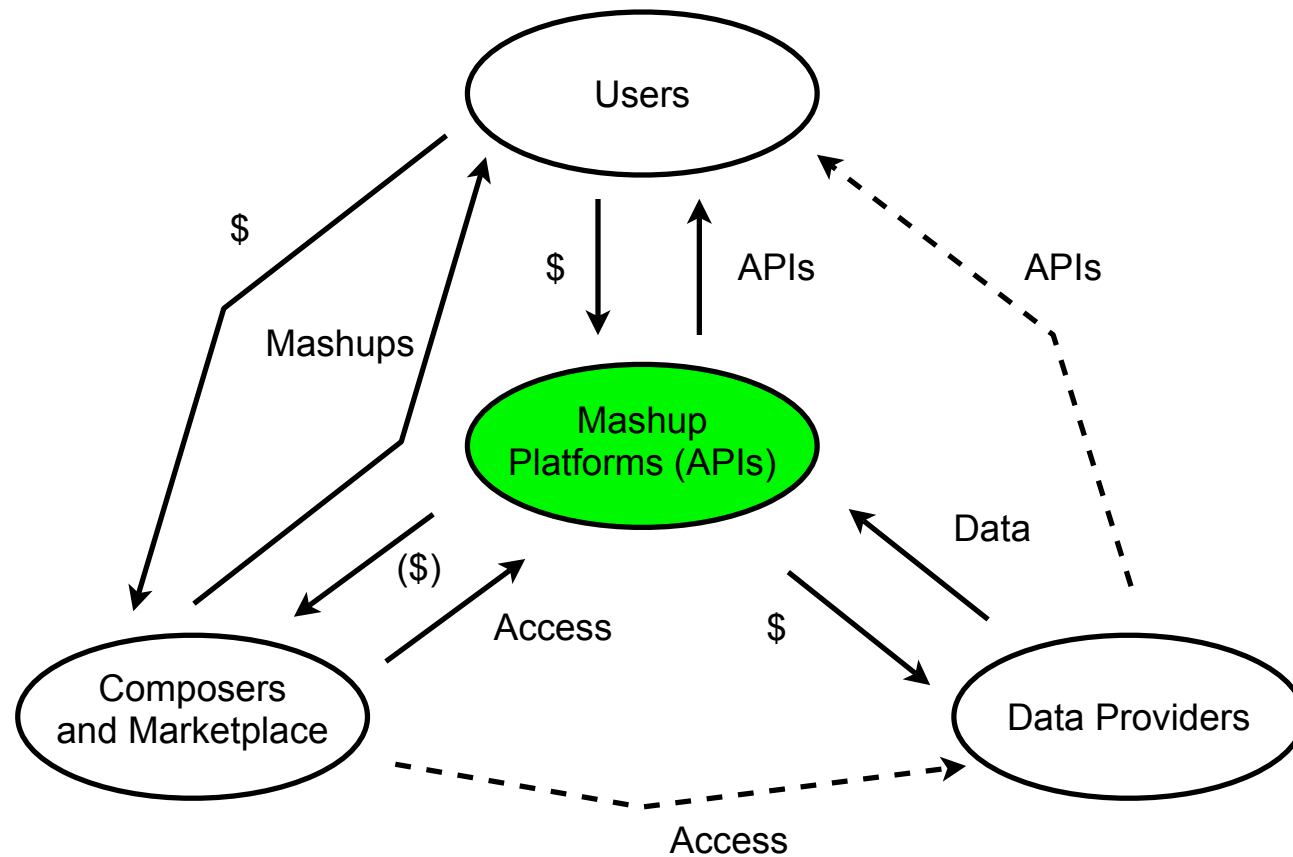




Best practices for Open APIs

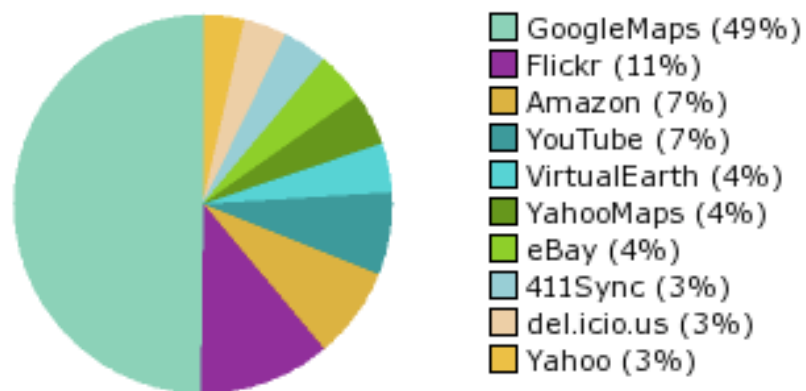
- Architecture of participation
 - Involve users • Low barrier for adoption • Create context
- Value is in the data, not functions
 - Own the data • Own the format • Control access
- Design for remixability
 - Componentize • Open APIs • Be your own customer
- Small is the new big
 - Scale with demand • Build on open source stacks

Mashup ecosystem



APIs

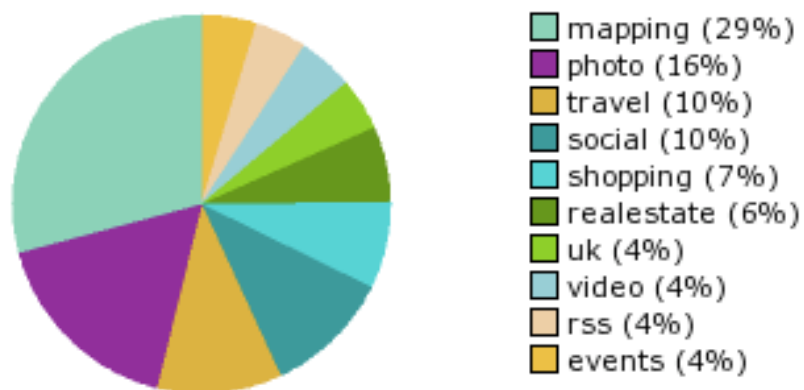
- As of Oct 17, 2007, there were 533 APIs registered on programmableweb.com



ProgrammableWeb.com 10/17/07

Mashups

- As of Oct 17, 2007, there were 2417 mashups registered on programmableweb.com



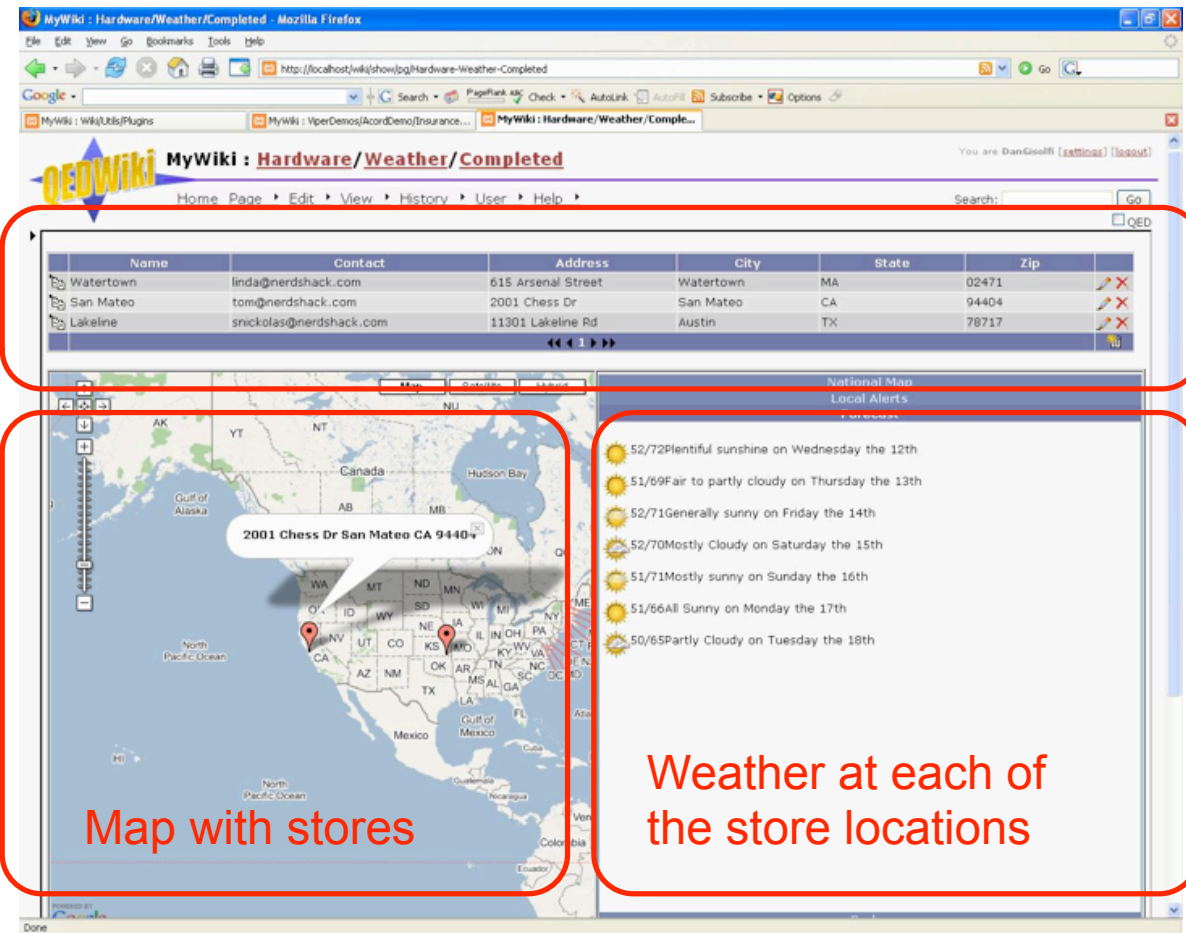
ProgrammableWeb.com 10/17/07

Tools

- Mashup composers (eg QEDWiki)

Store locations from
an ERP system

Other examples:
Serena Mashup
Composer and
Mashup exchange,
WSO2 Mashup
Server, Intel
Mashup Maker



The screenshot shows a web browser displaying a QEDWiki page titled "MyWiki : Hardware/Weather/Completed". The page features a table of store locations and a weather forecast map. The table is circled in red, and the map and weather forecast are also circled in red.

Name	Contact	Address	City	State	Zip
Watertown	linda@nerdshack.com	615 Arsenal Street	Watertown	MA	02471
San Mateo	tom@nerdshack.com	2001 Chess Dr	San Mateo	CA	94404
Lakeline	snickolas@nerdshack.com	11301 Lakeline Rd	Austin	TX	78717

Map with stores

Weather at each of the store locations

- 52/72 Plentiful sunshine on Wednesday the 12th
- 51/69 Fair to partly cloudy on Thursday the 13th
- 52/71 Generally sunny on Friday the 14th
- 52/70 Mostly Cloudy on Saturday the 15th
- 51/71 Mostly sunny on Sunday the 16th
- 51/66 All Sunny on Monday the 17th
- 50/65 Partly Cloudy on Tuesday the 18th



5. Towards ebusiness mashups

- 32 shopping related APIs on programmableweb.com
 - Early pioneers: eBay and Amazon

- Core APIs
 - Product catalog listing
 - Checkout and payment
 - On-demand products

- Supporting APIs
 - Escrow
 - Price comparison
 - Price history



Revenue models

- Pay-per-Click
 - Yahoo!Shopping.com
- Pay-per-Action
 - Amazon e-Commerce API
- Revenue sharing
 - buySAFE API
- Utility
 - Amazon EC2 service

eBusiness Mashups

- *Comparison shopping*
- Visualization
- Specialized shopping



Amazon eCommerce + eBay +
Shopping.com + Yahoo Shopping

eBusiness Mashups

- Comparison shopping
- *Visualization*
- Specialized shopping



Amazon eCommerce + Google
Maps + YouTube

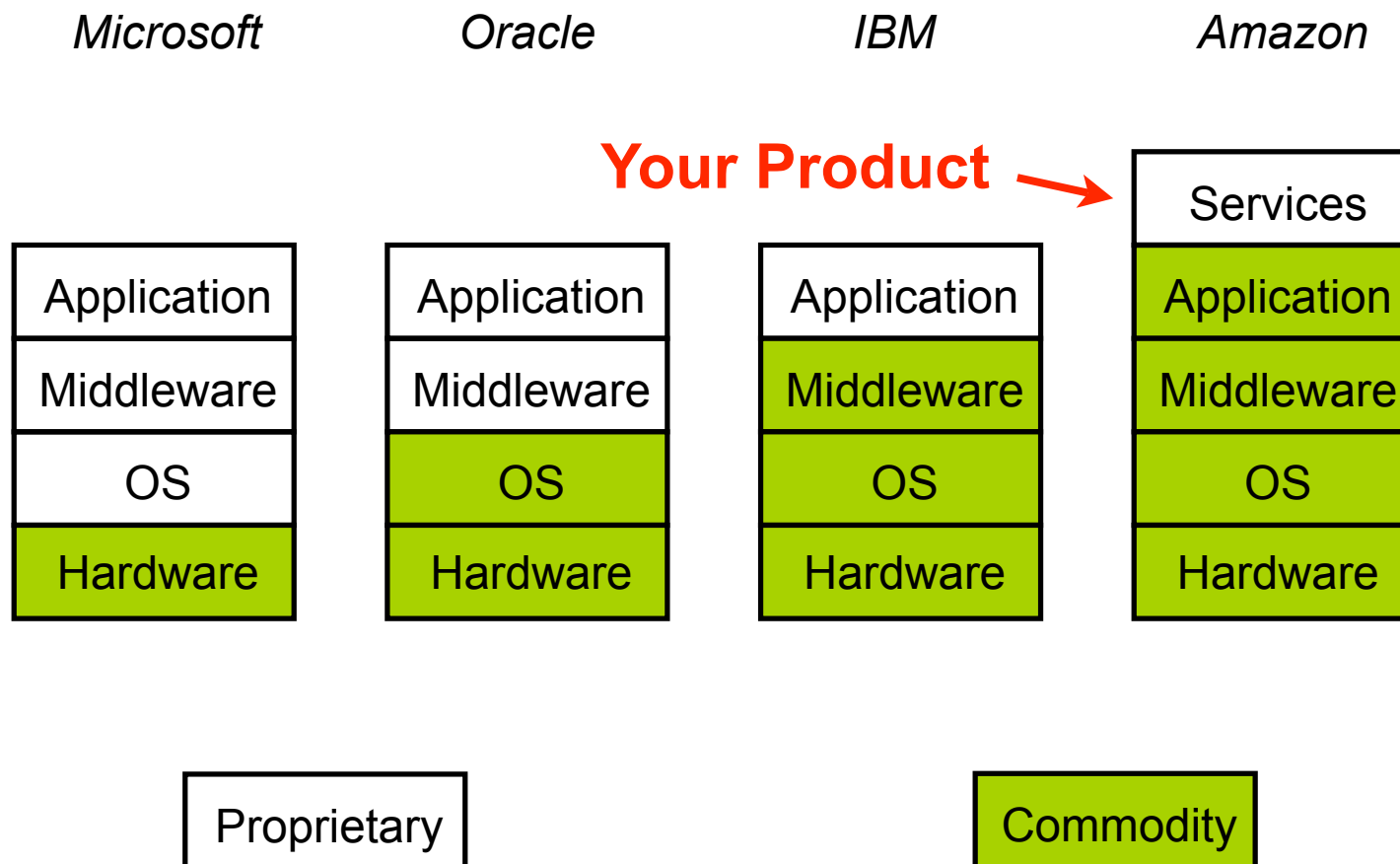
eBusiness Mashups

- Comparison shopping
- Visualization
- *Specialized shopping*



eBay

5. Production is free



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