

The background is a blurred image of a wall covered in various hand-drawn diagrams, sketches, and notes. Some of the visible elements include a yellow rectangular diagram on the left, a grid-like diagram in the center, and several arrows and lines connecting different parts of the wall. The overall tone is light blue and white, with some colorful accents from the drawings.

Making your APIs AI-Ready

Mike Amundsen
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Designing for a world where machines read your APIs



Shift #4 : Enable Discovery

Enable Discovery : Overview

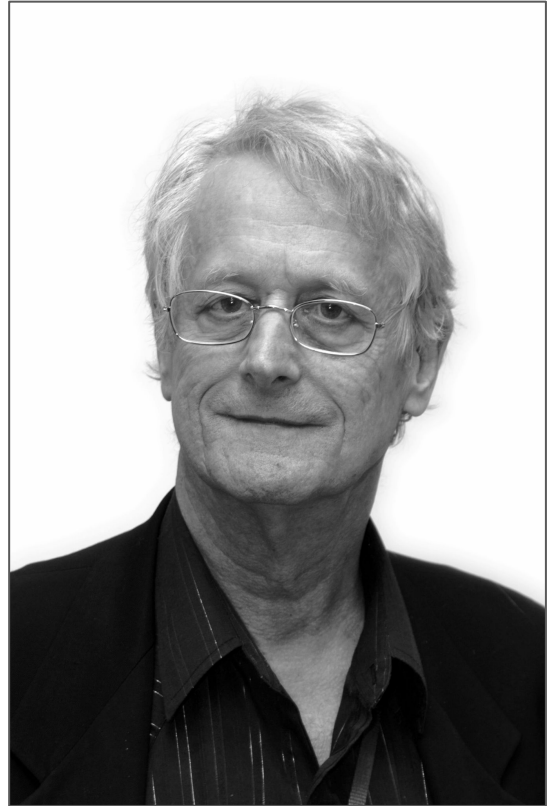
- Stop hiding capabilities
- Why this is important
- Beyond documentation
- What we can do right now



Enable Discovery

"Everything is deeply intertwined"

– *Ted Nelson*



Enable Discovery : Stop hiding capabilities

- If bots can't find it, they won't use it
- Machines depend on in-message signals
- Discovery works at both the service and task level
- Bots are tuned for discovery



Discovery is a feature, not an afterthought

Enable Discovery : Why this is important

- Machine won't look for external docs
- Supplying just the API docs is rarely enough
- Machines recognize and react to “signals”
- Think of your API as a “maze” the agent needs to solve



Help machines navigate the maze

Enable Discovery : Beyond documentation

- Prose documentation is good, but not sufficient
- Machines don't make leaps of thought or assumptions
- Without explicit signals, machines hallucinate

Enable Discovery

```
- {  
  id: "fb4a2427-2cff-41b6-a61b-e96bccacfa0e",  
  title: "Initial Task",  
  description: "This is a sample task",  
  dueDate: "2025-06-01",  
  status: "active",  
  priority: 3,  
  assignedUser: "alice",  
  _links: {  
    - self: {  
      href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e",  
      method: "GET"  
    },  
    - edit: {  
      href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e/edit",  
      method: "POST",  
      + args: [ ... ]  
    },  
    - updateStatus: {  
      href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e/status",  
      method: "PUT",  
      - args: [  
        "id",  
        "status"  
      ]  
    },  
    - assignUser: {  
      href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e/assignee",  
      method: "PUT",  
      - args: [  
        "id",  
        "assignedUser"  
      ]  
    },  
    - setDueDate: {  
      href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e/due-date",  
      method: "PUT",  
      - args: [  
        "dueDate"  
      ]  
    }  
  }  
}
```

Enable Discovery

```
- {
  id: "fb4a2427-2cff-41b6-a61b-e96bccacfa0e",
  title: "Initial Task",
  description: "This is a sample task",
  dueDate: "2025-06-01",
  status: "active",
  priority: 3,
  assignedUser: "alice",
  _links: {
    - self: {
      href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e",
      method: "GET"
    },
    - edit: {
      href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e/edit",
      method: "POST",
      + args: [ ... ]
    },
    - updateStatus: {
      href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e/status",
      method: "PUT",
      - args: [
        "id",
        "status"
      ]
    },
    - assignUser: {
      href: "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e/assignee",
      method: "PUT",
      - args: [
        "id",
        "assignedUser"
      ]
    },
    - setDueDate: {
```

Enable Discovery

```
{
  "id": "fb4a2427-2cff-41b6-a61b-e96bccacfa0e",
  "title": "Initial Task",
  "description": "This is a sample task",
  "dueDate": "2025-06-01",
  "status": "active",
  "priority": 3,
  "assignedUser": "alice",
  "links": {
    "self": {
      "href": "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e",
      "method": "GET",
      "description": "Retrieve the current details for this task."
    },
    "edit": {
      "href": "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e/edit",
      "method": "POST",
      "args": [],
      "description": "Update one or more attributes of this task."
    },
    "updateStatus": {
      "href": "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e/status",
      "method": "PUT",
      "args": [
        "id",
        "status"
      ],
      "description": "Change the status of this task."
    },
    "assignUser": {
      "href": "/tasks/fb4a2427-2cff-41b6-a61b-e96bccacfa0e/assignee",
      "method": "PUT",
      "args": [
        "id",
        "assignedUser"
      ],
      "description": "Assign this task to a specific user."
    }
  }
}
```



Include navigation metadata in responses

Enable Discovery : What we can do right now

- Maintain and use an API registry
 - Postman, Swagger, etc. for public APIs
 - Kong, WS02, etc. for internal APIs
- Manage vocabularies with tags for findability
- Publish and use API vocabularies



*Enable discovery **across** APIs, too.*



Enable Discovery : Summary

- Stop hiding capabilities
 - If they can't find it, they won't use it
- Why this is important
 - Help machines navigate “the maze”
- Beyond documentation
 - Include navigation metadata in responses
- What we can do right now
 - Maintain and use registries and vocabularies



Enabling discovery makes autonomy possible

Enabling Discovery : Quick Quiz

- 5.1 Enabling discovery makes _____
- A. it harder for ai-agents to find and use your APIs
 - B. AI-driven autonomy possible
 - C. it too difficult to deploy APIs
 - D. designing APIs impractical
- 5.2 All APIs should be listed in one or more _____
- A. github repositories
 - B. product manager's spreadsheets
 - C. shared API registries
 - D. audit logs
- 5.3 Without explicit signals in the API documentation, machines will _____
- A. do just fine
 - B. reach out to external documents for help
 - C. not make any API calls at all
 - D. hallucinate interactions



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