

Secrets of a Seamless Directory Backbone Service

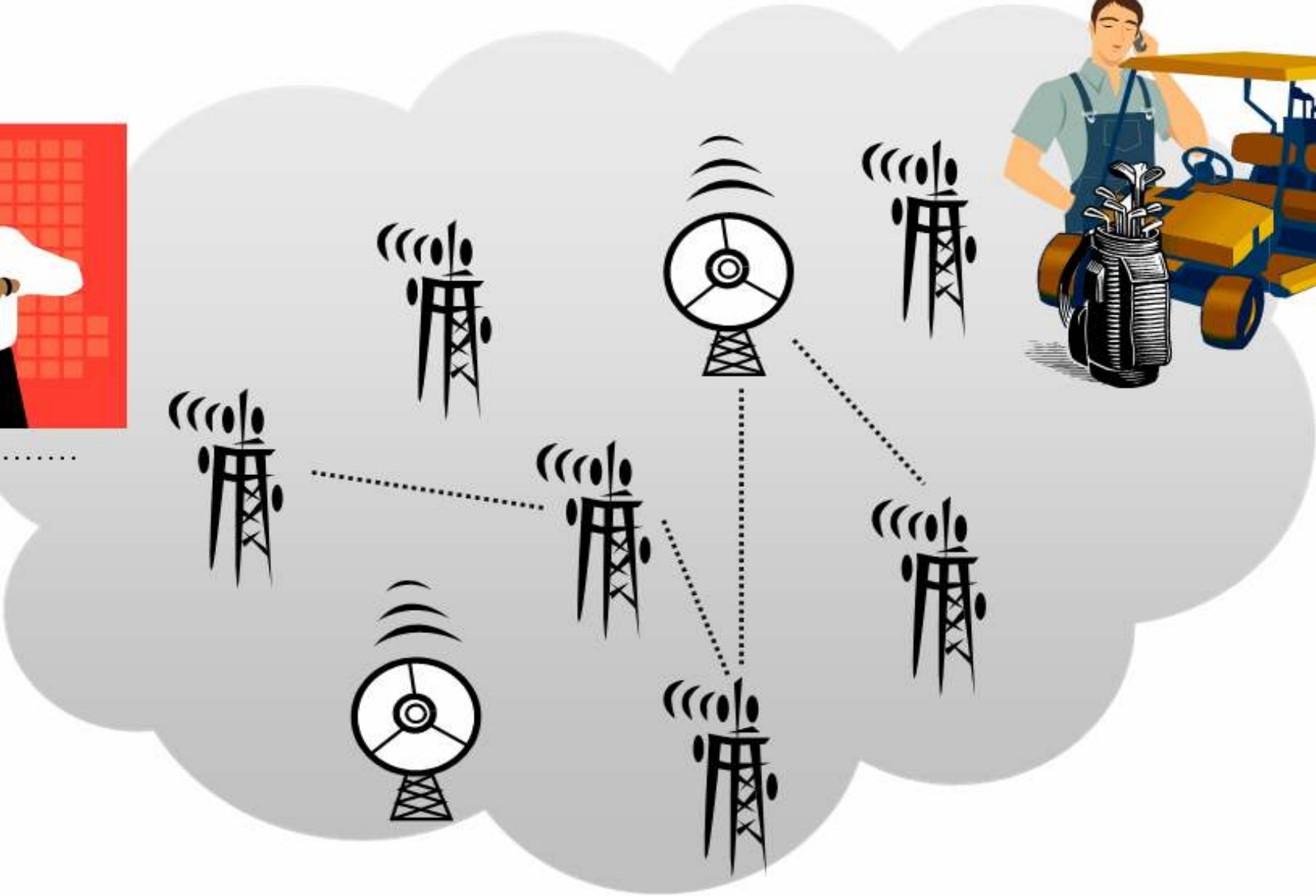
Hilla Reynolds
Director, Development @ CA

6 September 2007

Mobile Network



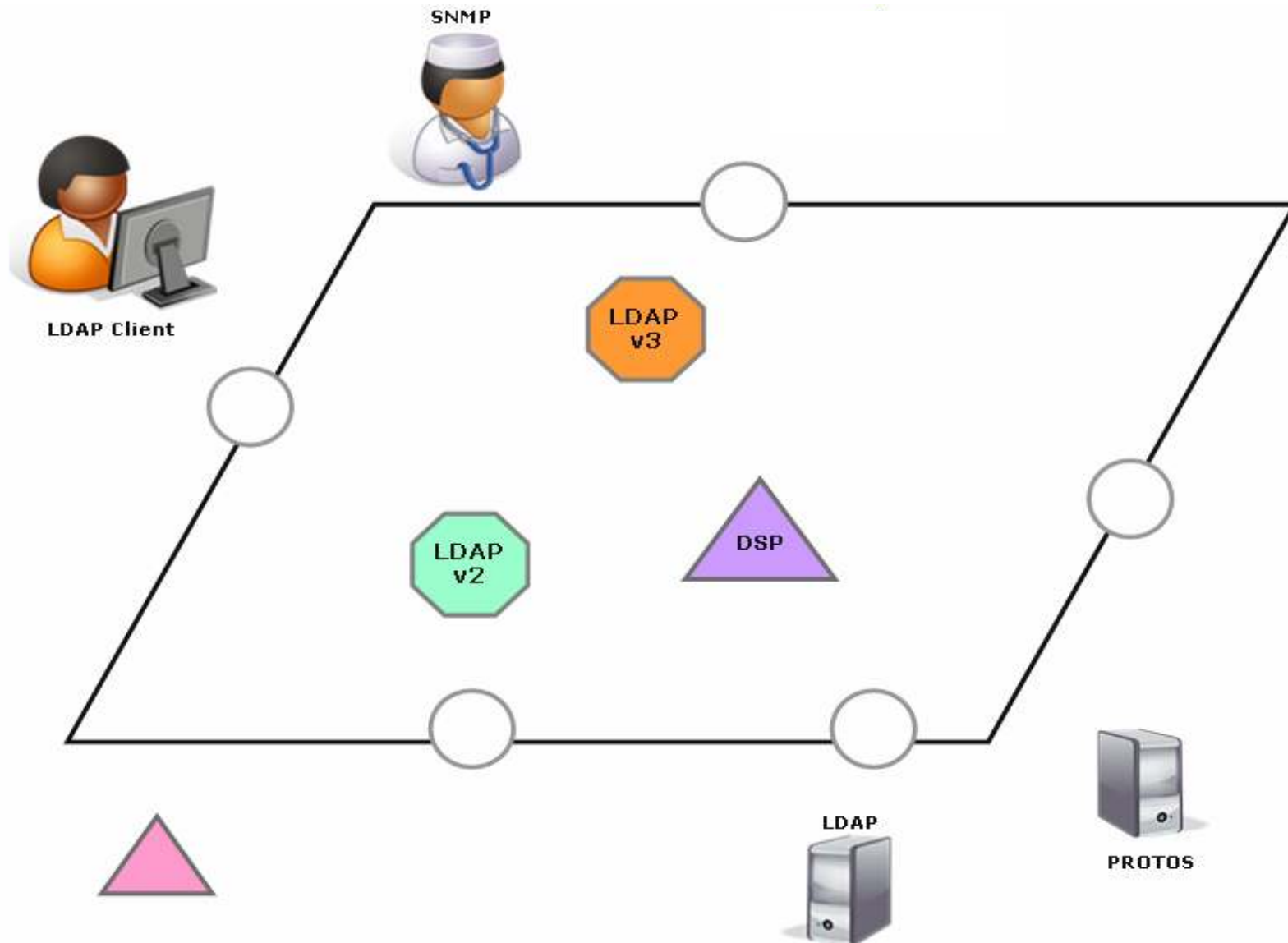
Calling.....



Secrets of a Seamless Directory Backbone Service

- > Adherence to Standards
- > High Speed Switching and Routing
- > Distributed Searches
- > Concurrent Replication
 - Load Sharing
 - Fail Over
- > No Service While Recovering
- > Views

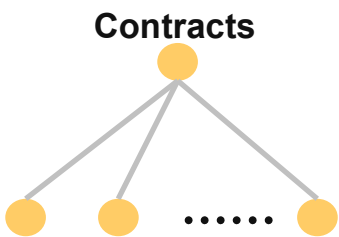
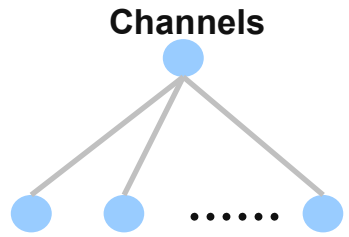
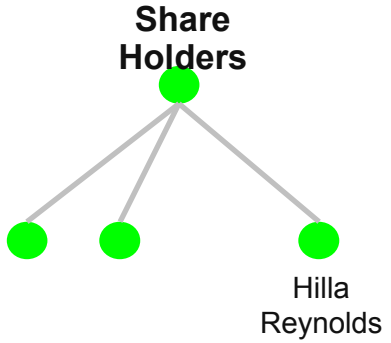
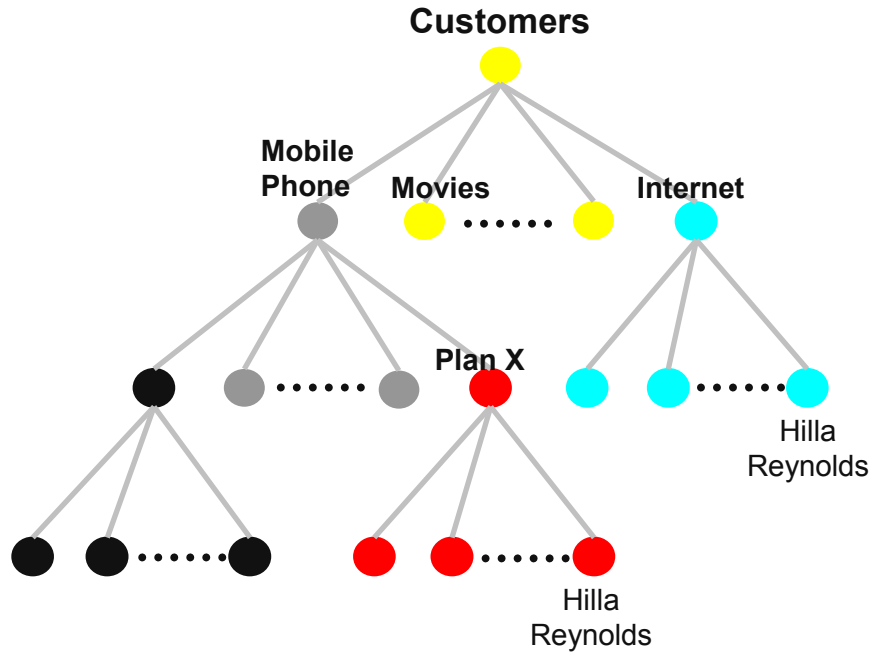
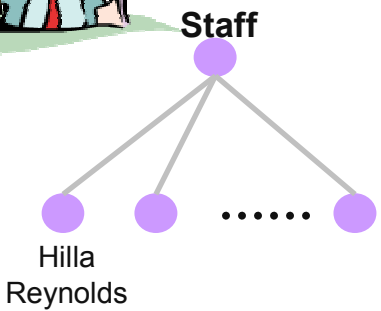
Symbols in a Directory Backbone Service



Example: Directory Information Tree (DIT)



Hilla Reynolds

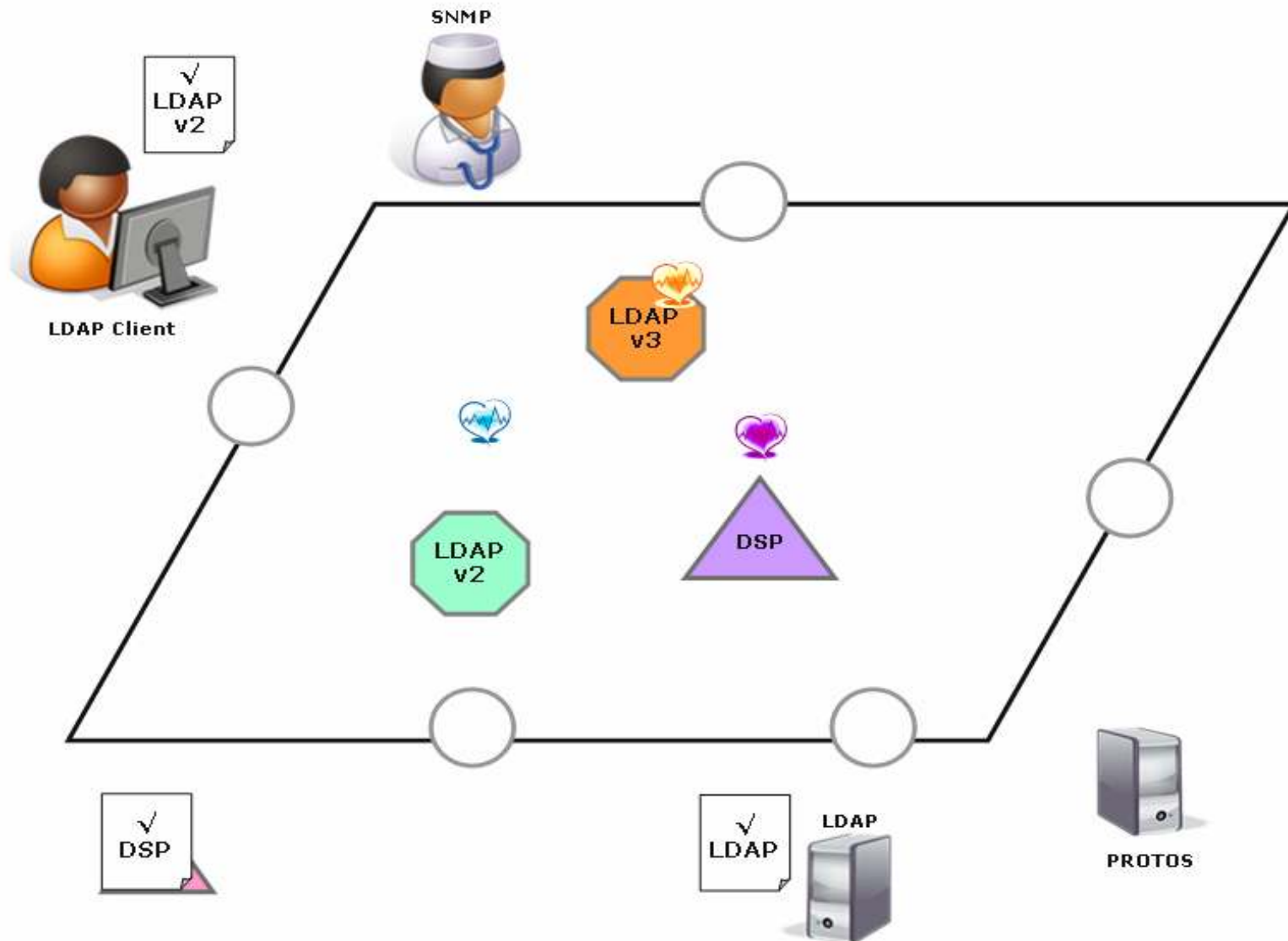


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Adherence to Standards



Secret 1: Adherence to Standards

- > Adhere to LDAP standard
- > Support LDAP extensions
- > Conform with industry test suites
- > Perform robustness testing (PROTOS)
- > Support X.500 **D**istributed **S**ervice **P**rotocol
- > Support **S**imple **N**etwork **M**anagement **P**rotocol

Talk the same language!

Secrets of a Seamless Directory Backbone Service

> Adherence to Standards

> **Shortest Path Routing**

> Distributed Searches

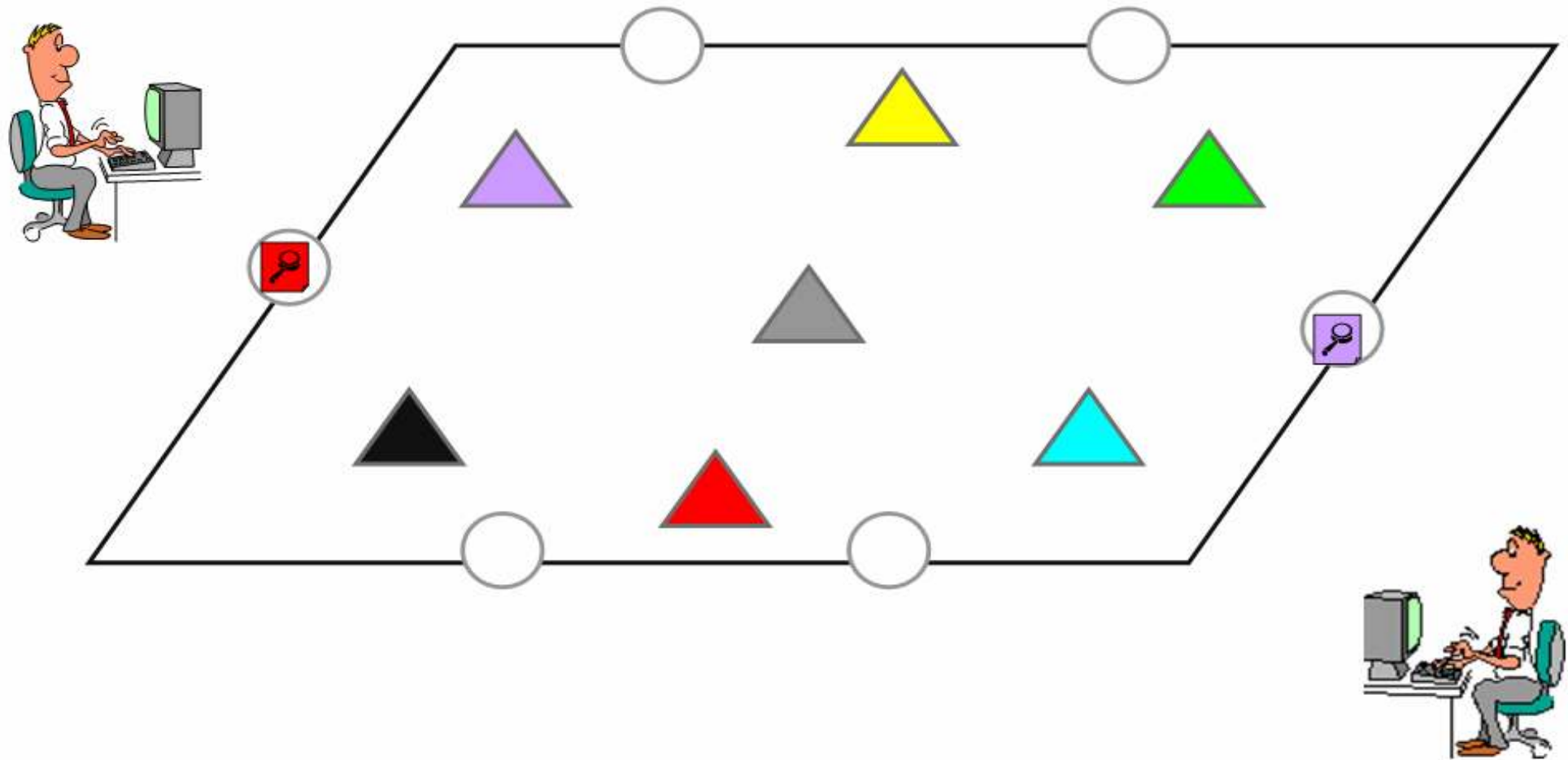
> Concurrent Replication

- Load Sharing
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Shortest Path Routing



Secret 2: High Speed Switching and Routing

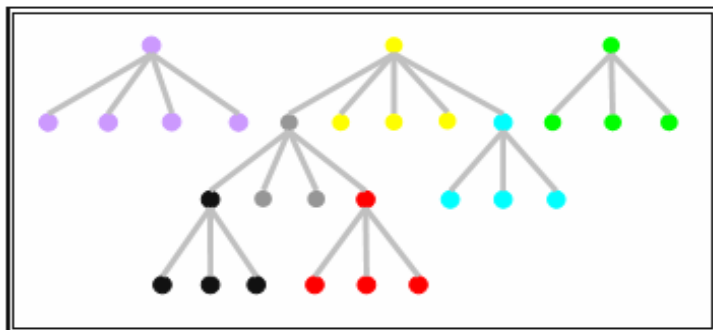
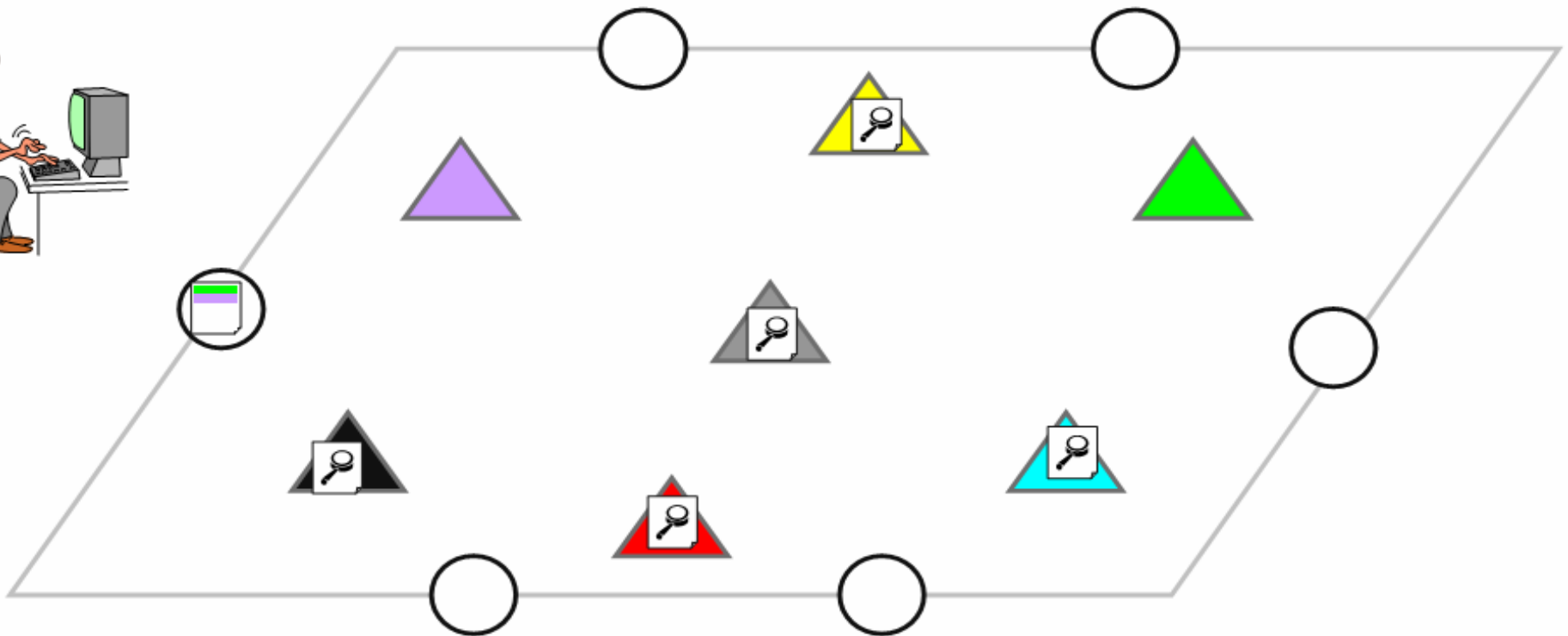
- > Keeps it simple for the client
- > Meshed server network
- > LDAP servers can be included as end points
- > DSP, a server-to-server protocol
- > Multi-chaining when necessary
- > Shortest path routing

The Backbone does the work, not the client

Secrets of a Seamless Directory Backbone Service

- > Adherence to Standards
- > High Speed Switching and Routing
- > **Distributed Searches**
- > Concurrent Replication
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Distributed Search



Secret 3: Distributed Searches

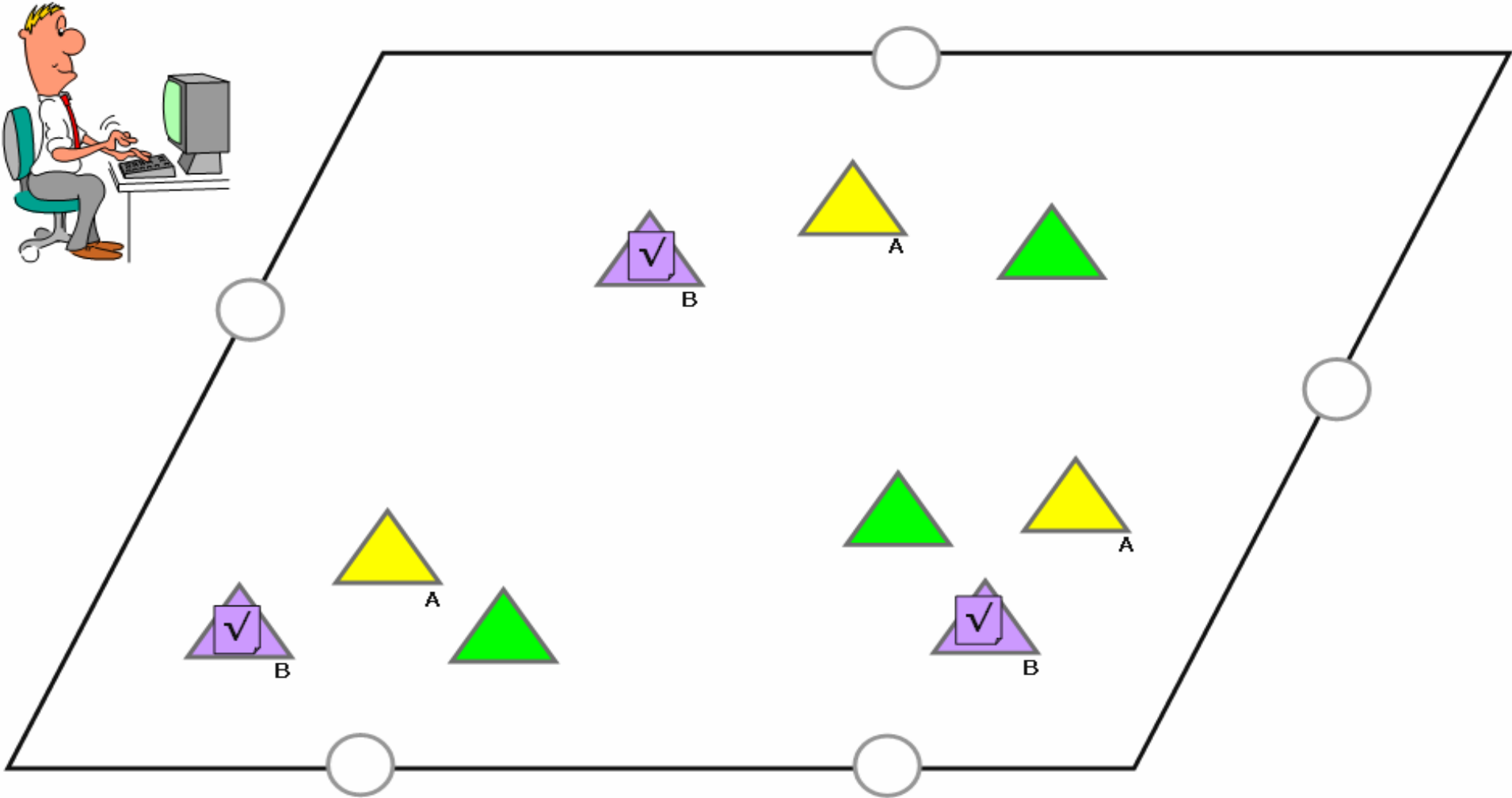
- > Keeps it simple for the client
- > Distribute for geographic, administrative or security reasons
- > One client query results in
 - Many (parallel) searches in different servers
 - Return a single authoritative net result to the client
- > LDAP servers can be included as end points

The Backbone does the work, not the client

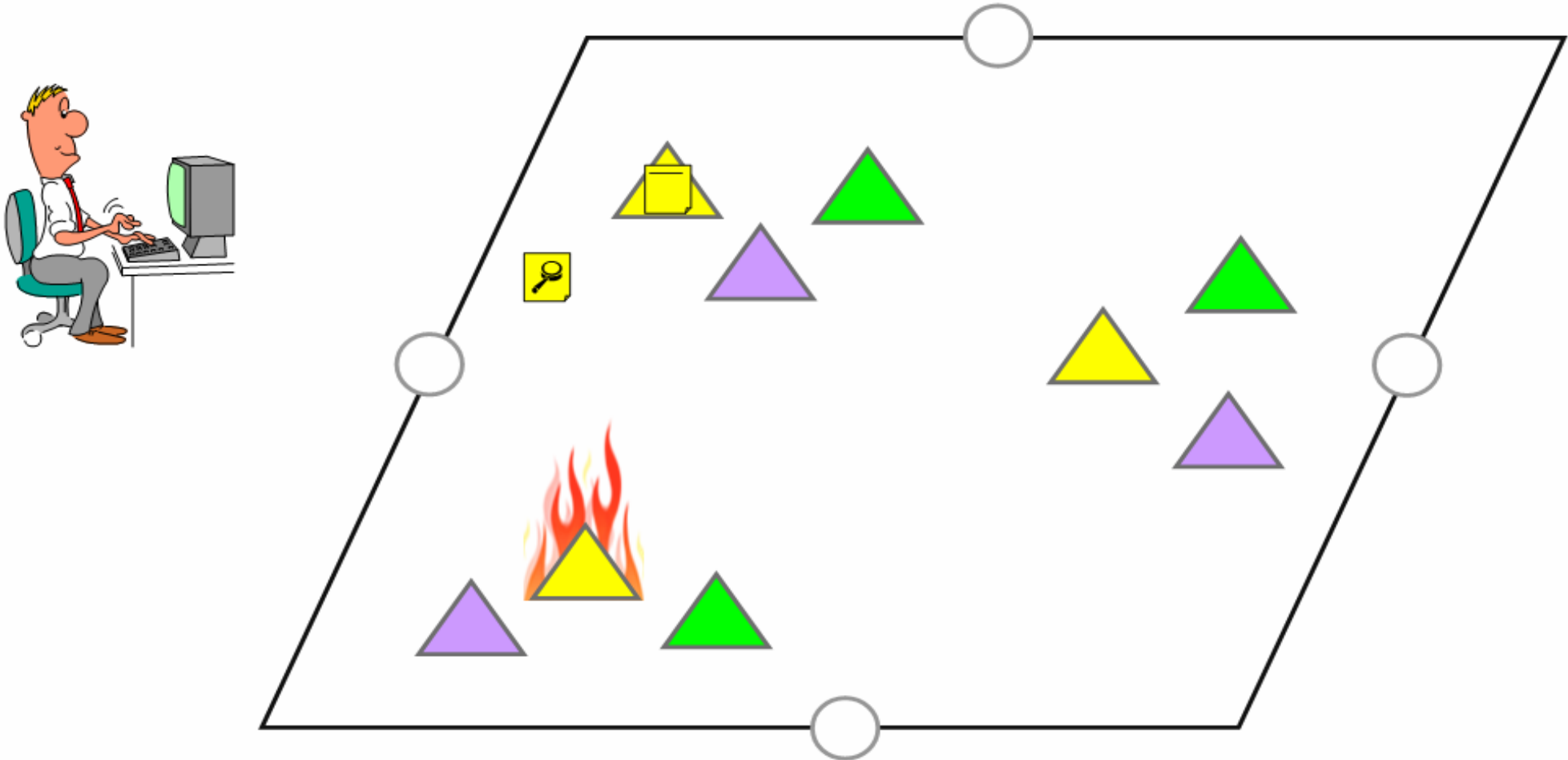
Secrets of a Seamless Directory Backbone Service

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- > Distributed Searches
- > **Concurrent Replication**
 - Load Sharing
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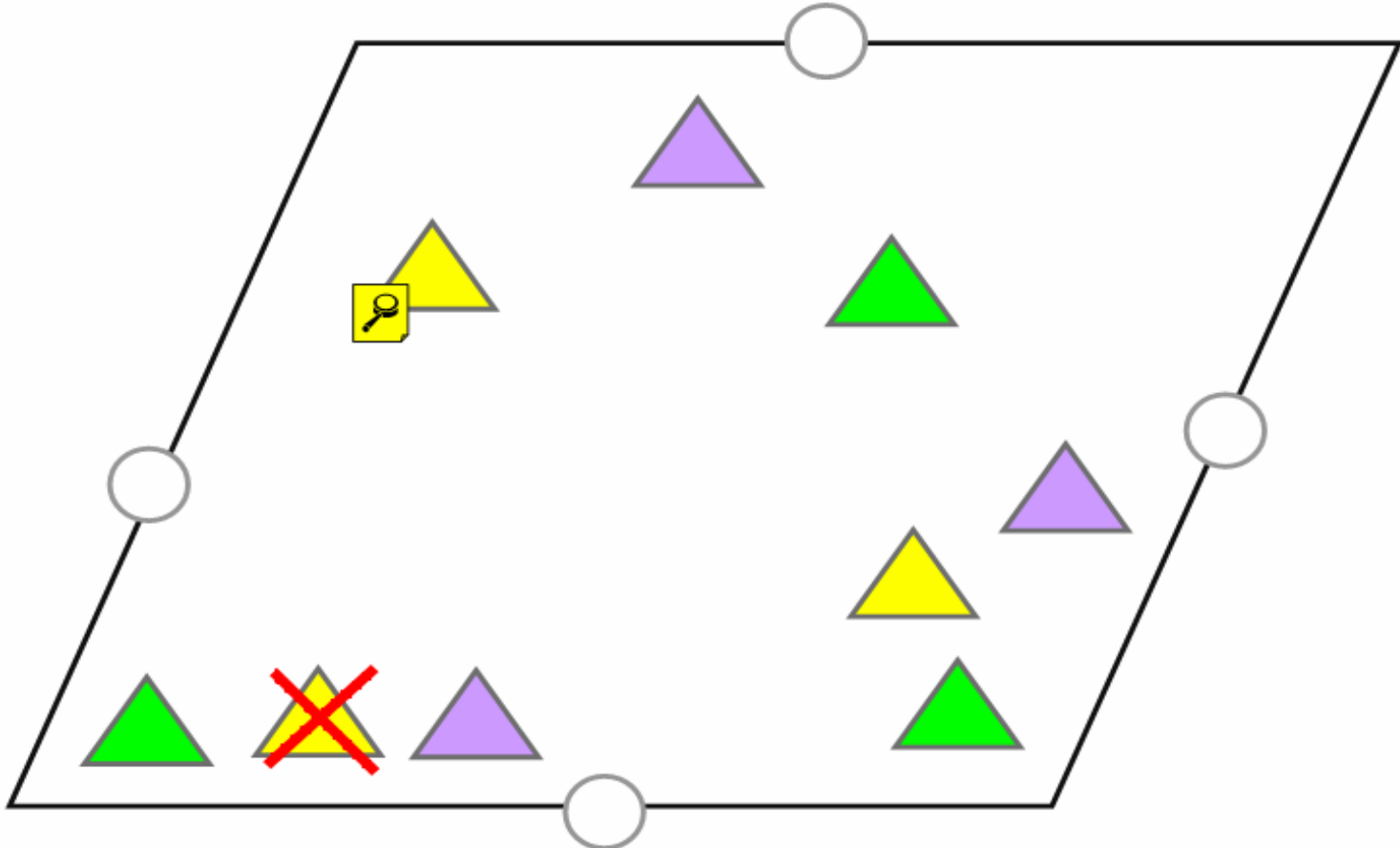
Concurrent Replication



Load Sharing



Fail Over



Secret 4: Concurrent Replication

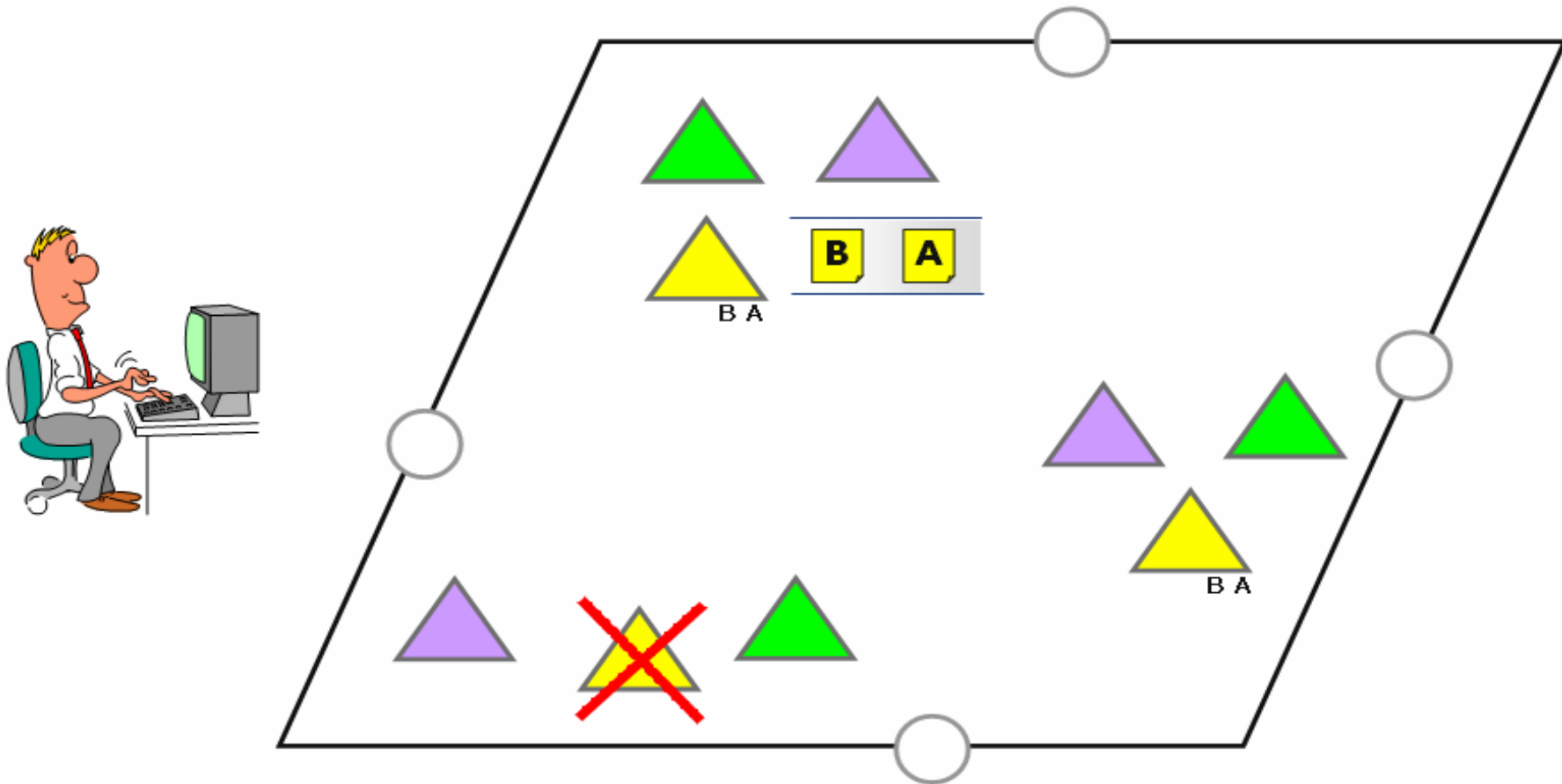
- > Keeps it simple for the client
- > The entire backbone remains consistent
- > True multi-master system
- > Effective seamless load sharing
- > Automatic fail-over
- > Client always reads what he has written

The Backbone does the work, not the client

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 - Fail Over
- > **No Service While Recovering**
- > Views

No Service While Recovering



Secret 5: No Service while recovering

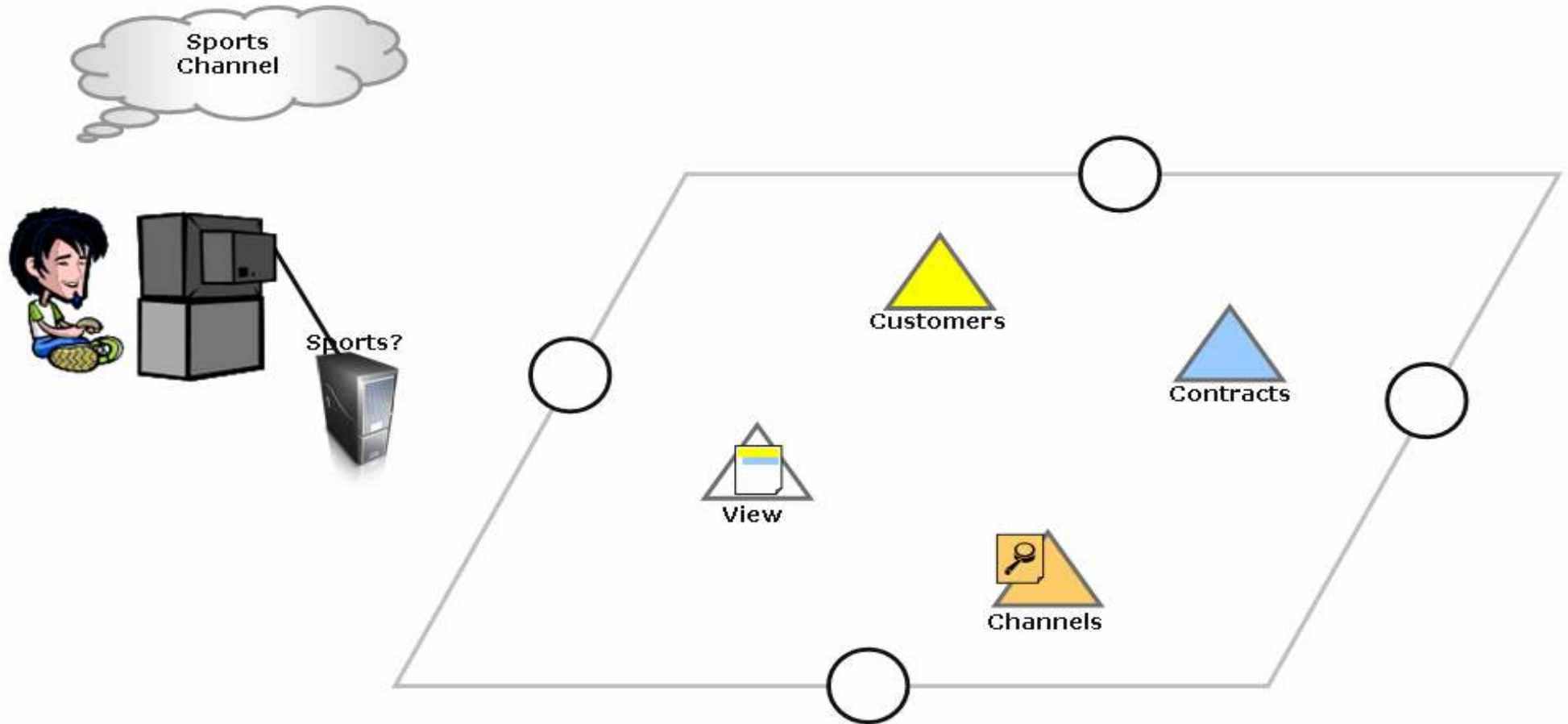
- > Keeps it simple for the client
- > Client never sees out-of-date information
- > Seamless fail-back
- > Client always reads what he has written
- > Recovery is secret, client never needs to know

The Backbone does the work, not the client

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- > **Views**

Views



Secret 6: Views

- > Keeps it simple for the client
- > Collect data from various areas of the DIT
- > Configuration defines the “linked” searches
- > Configuration defines (pruned) return values
- > Directory administrators have full control
- > Actual directory structure is hidden

The Backbone does the work, not the client

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Secrets of a Seamless Directory Backbone Service

Summary

The Directory Backbone Service
does the work – not the Client

Secrets of a Seamless Directory Backbone Service

Questions?

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