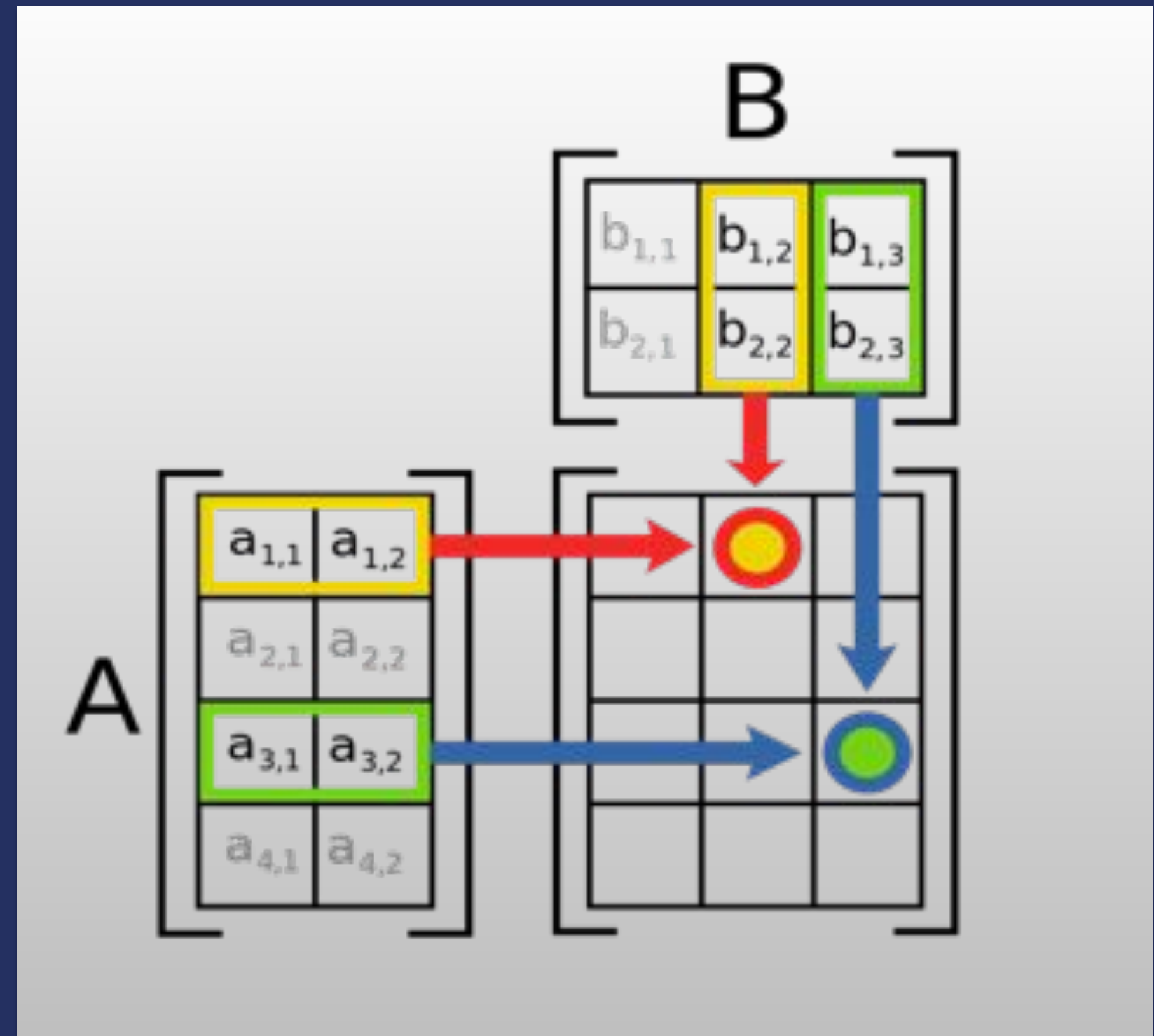OFFICE OF
STRATEGIC NATIONAL ALIEN PLANNING

Not Invented Here

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Due to HeartBleed, O-SNAP executive management no longer trusts software written and maintained by outside development organizations.

A large number of O-SNAP projects require efficient linear algebra. Improve the efficiency of the provided matrix multiply code.

- **Changes how data is stored in memory to reduce memory transfers**

- **Generally improves compute performance (FLOPS)**

- **Usually algorithm and implementation specific**

Next Steps

Go to the shell and pull from the repository.

Use data reorganization to improve serial performance. Then implement parallelism using at least one of the technologies. Write about the effects of your data reorganization effort.

Solution Sketch

- **Initialize the matrices**

- **Transform the data to a more efficient representation**

- **Modify the multiplication logic to use your more efficient representation**