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Chapter 9 Exercise

The Simple Object Access Protocol (SOAP) is a protocol that allows different elements of an application to communicate with each other. Its purpose is to be an intermediate language for applications using different programming languages. Representational State Transfer (REST) is an architectural style made to allow interoperability between different Internet computer systems. It has strict rules so that RESTful services can easily communicate with each other.

SOAP has several advantages. It can be used over different platforms and operating systems, works on HTTP protocol, and can be easily transmitted through different network and security devices like firewalls, where other protocols might need accommodations. SOAP also has some disadvantages. Speed can be an issue, as the data structure is based on XML, a human-readable language. This makes it easy to read and understand, but the messages are large compared to other protocols. It's also not as flexible as newer methods.

REST also has its perks. It is resource-based, enforcing statelessness and improving reliability and performance. It has a simple, uniform interface, constructs familiar to anyone who knows HTTP, and any language using HTTP can be used. REST is also very widely used, has effective mechanisms to reduce latency and load on servers, has separation between client and server, and has a resilient system that won't collapse if one component fails. There are some disadvantages to REST as well. It has some design limitations and lacks a definitive standard to determine if something conforms to the RESTful standards. Additionally, clients must perform state management tasks as RESTful systems must be stateless.

Sources:

<https://www.plesk.com/blog/various/rest-representational-state-transfer/>

<https://www.techtarget.com/searchapparchitecture/definition/SOAP-Simple-Object-Access-Protocol>

<https://www.techtarget.com/searchapparchitecture/definition/REST-REpresentational-State-Transfer>