

# Taking the Ubiquitous Administrator out of the Trust Chain

Adolf Hohl

University Freiburg, Germany

Alf Zugenmaier

Microsoft Research Cambridge, UK

Workshop UK Ubinet; 6 May 2004

# Agenda

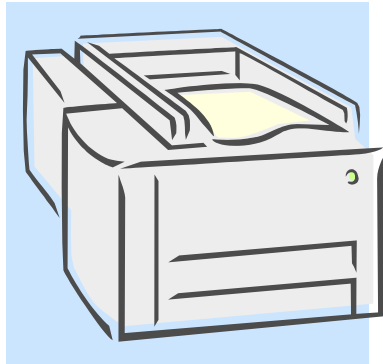
---

- Problem
- Trust Model
- Attestation
- Evaluation
- Conclusion

# Problem Statement

---

smart environment



What happens to personal data?

Adherence to policies? In presence of an attacker?

A question of trust?

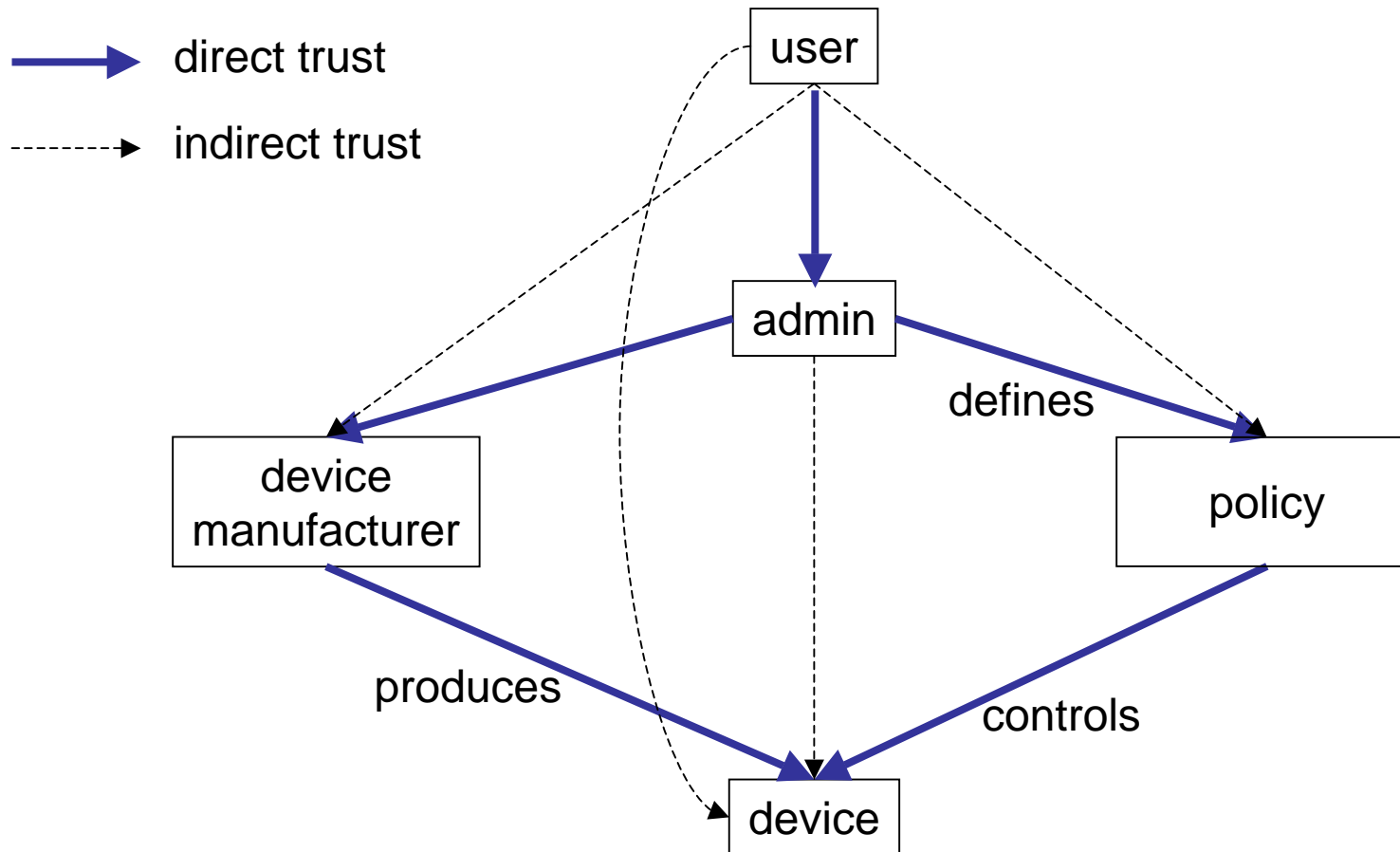
# Trust – Definition

---

the expectation about an entity to behave as desired (in respect of one specific aspect)

# Trust Model – Today

---



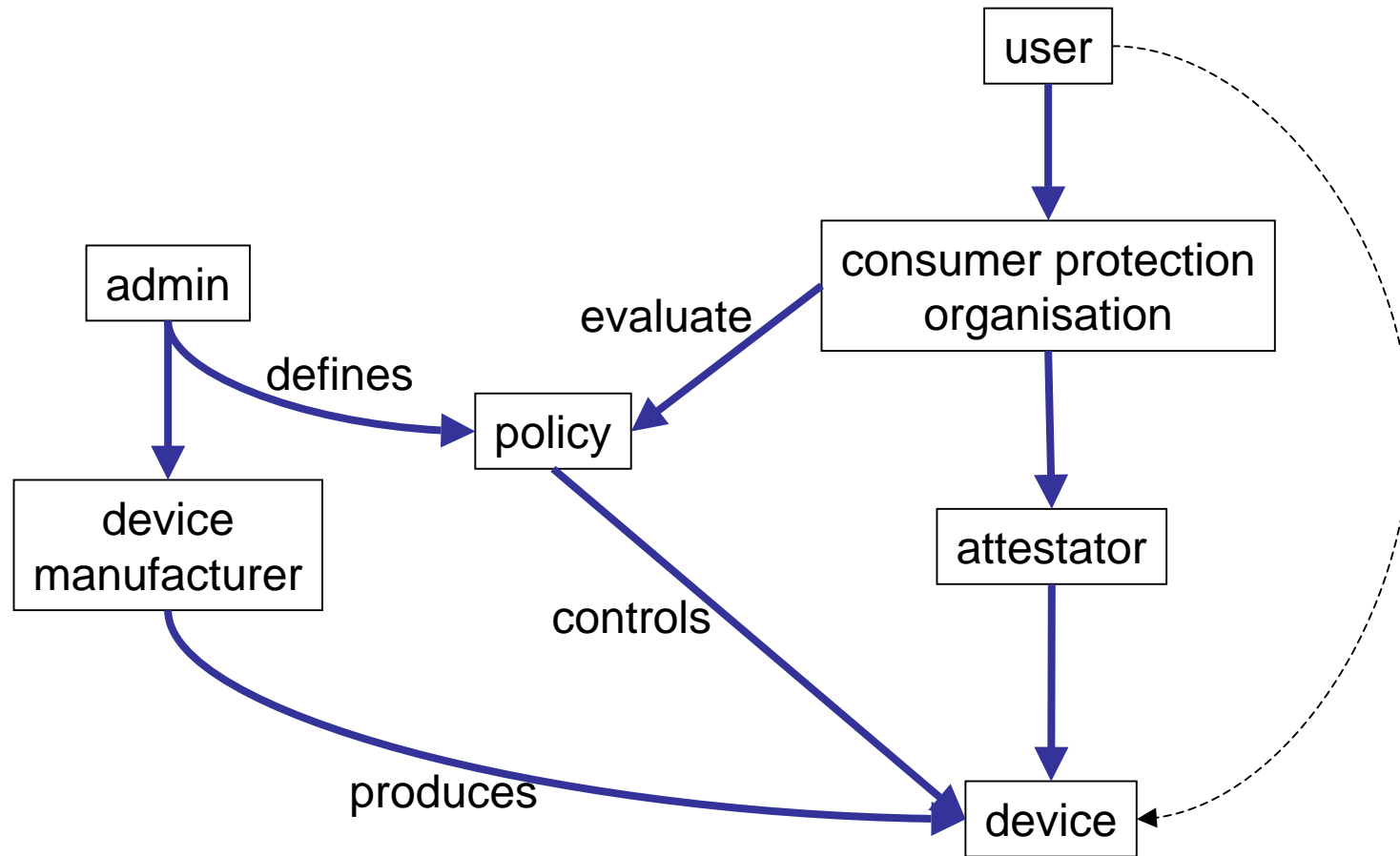
# Introducing Attestation

---

- attestator vouches for the device adhering to defined policy
- attestation certificate verified by personal device
- policies evaluated/stated by consumer protection organization
- specific policy chosen by user of personal device

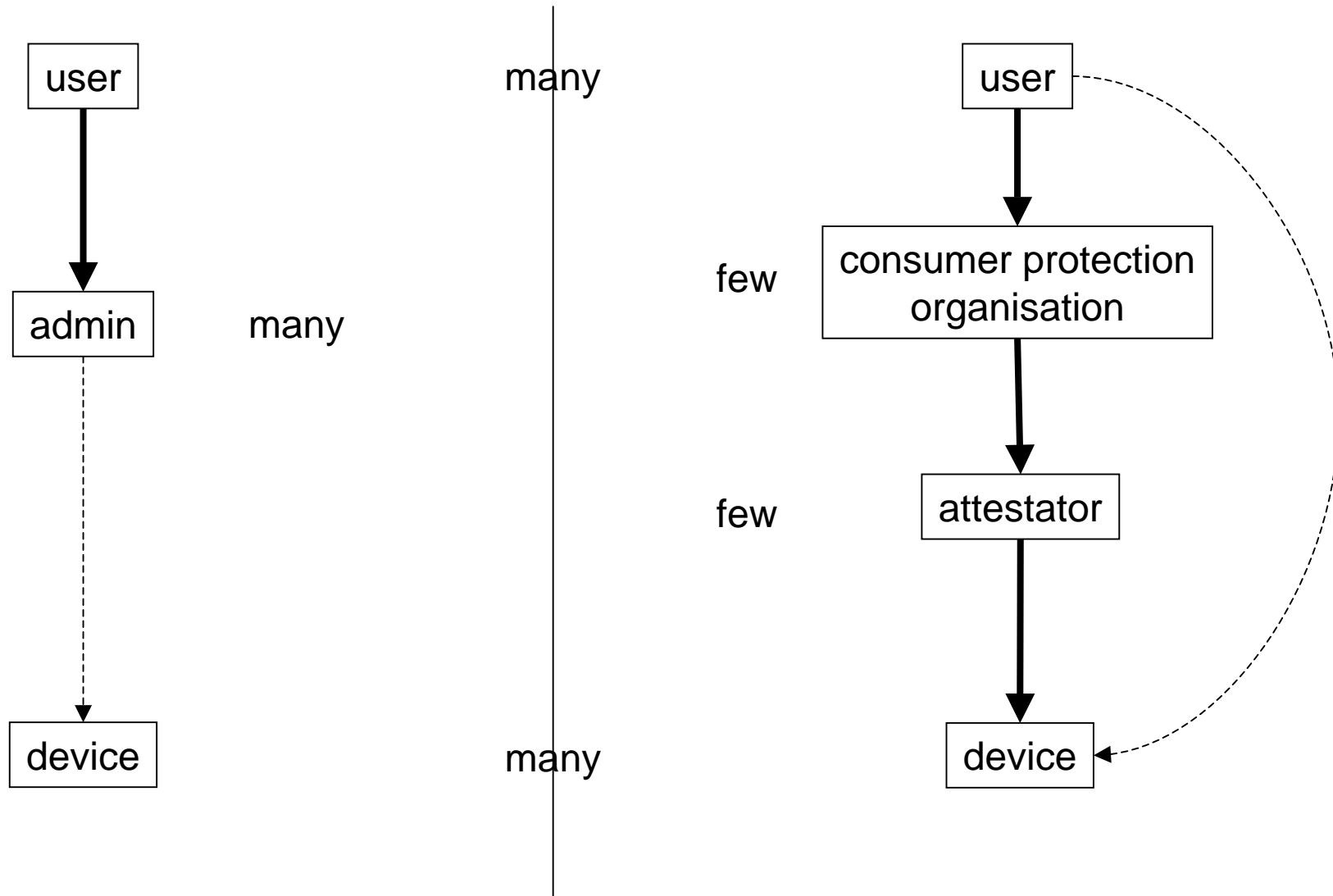
# Trust Model – with Attestation

---



# Evaluation – Trust Chain

---



# Evaluation

---

- reduced number of policies
- translation of machine policies into human readable policies by trusted CPO
- attestator may be cut out of the loop if CPO is capable of verifying each technical implementation
- Are trust mechanisms sufficient to enforce correct behaviour of CPO and attestator?
- More issues: configuration management, patches, timeliness, services spanning multiple devices, unforeseen usage, ...

# Conclusion

---

- Ubicomp can provide “easy” ground for attestation – single purpose devices
- Trust building complex process – cannot be forced
- Attestation weaker than self protection