Message Queuing Telemetry Transport

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Pub/Sub Kommunikation

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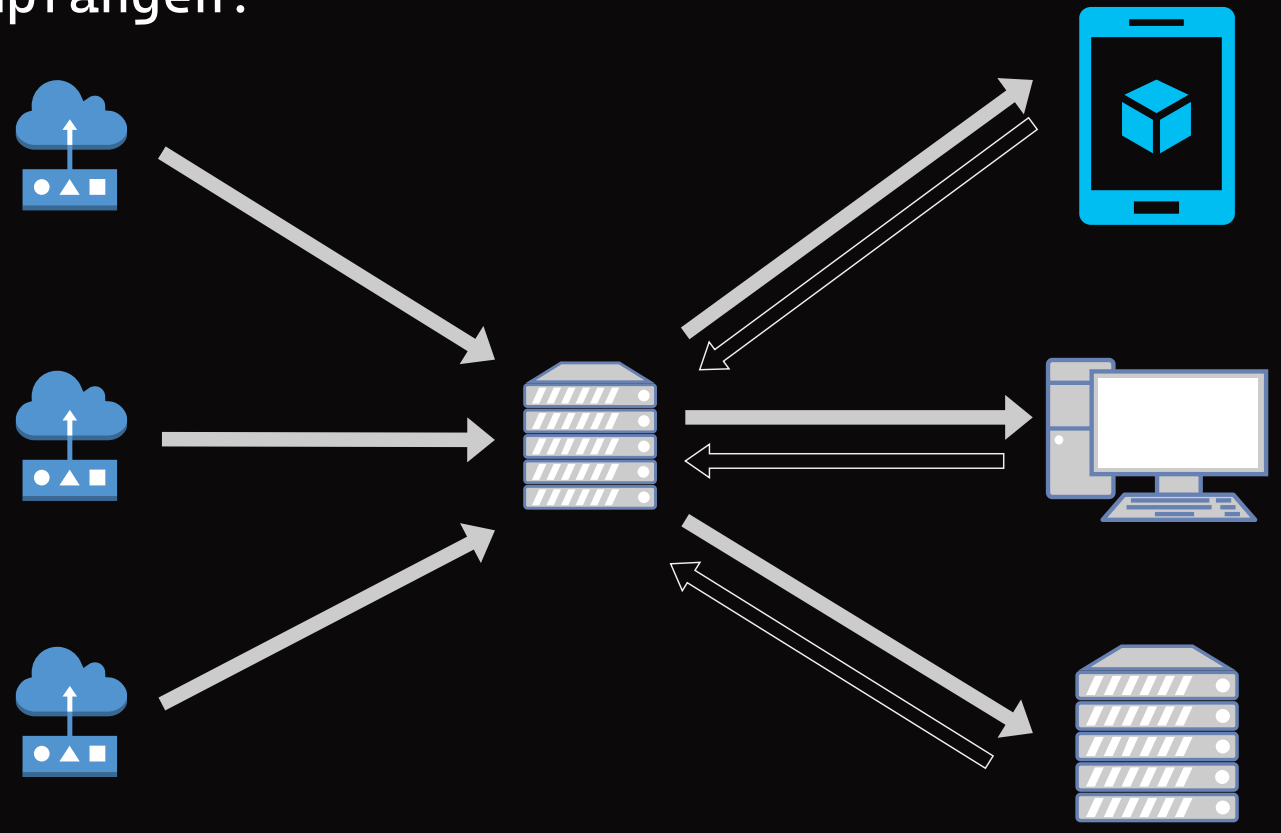
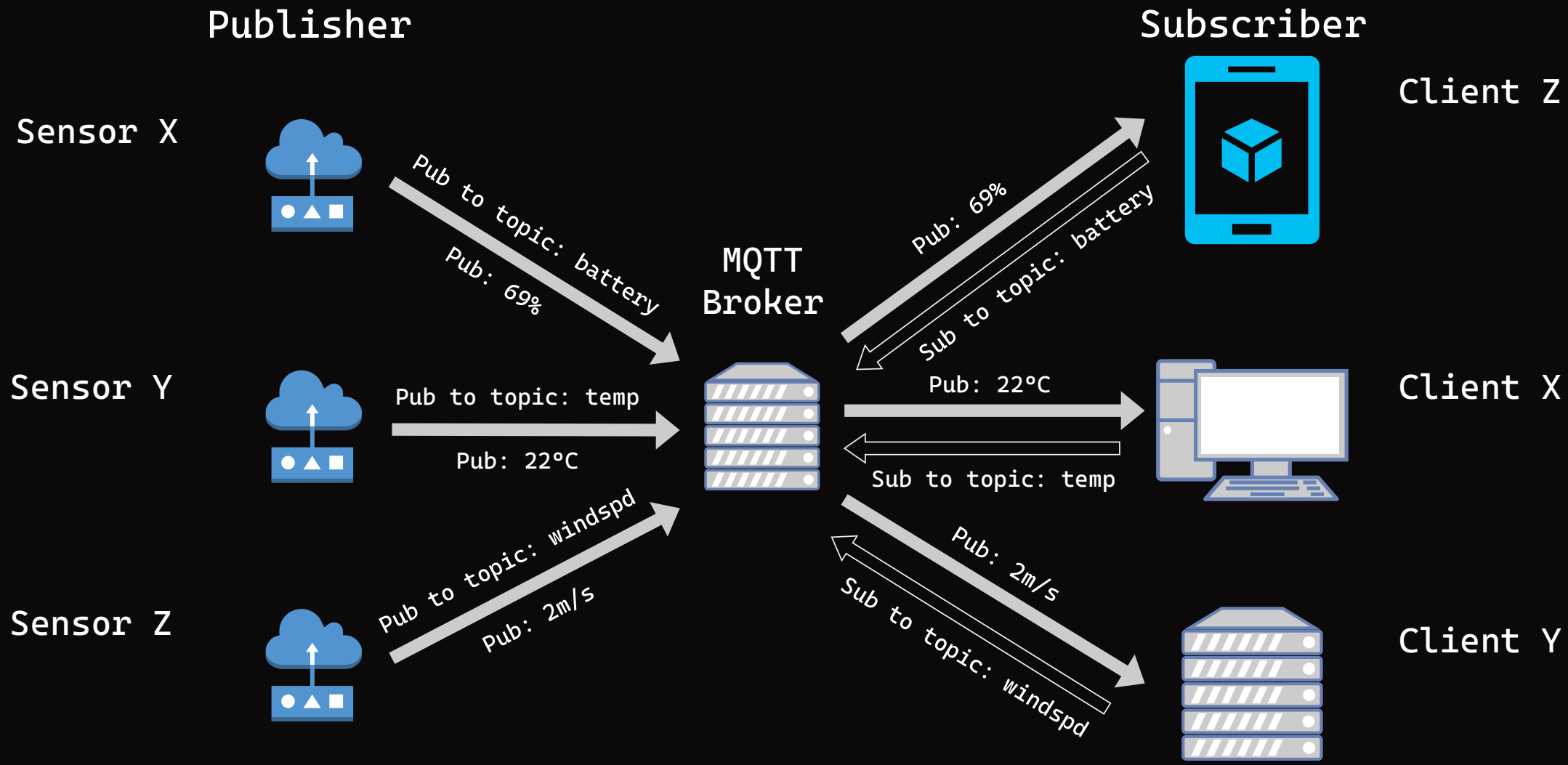
- Teilnehmer
  - Publisher
  - MQTT-Broker
  - Subscriber
- Vorteile:
  - Skalierbarkeit
  - Flexibilität
  - Ressourcensparend



Funktionsprinzip



Topic Format

Vehicle/motor/power → 150
Vehicle/climate_control/mode → “auto“

Wildcards:
- + Single level
- # Multi level

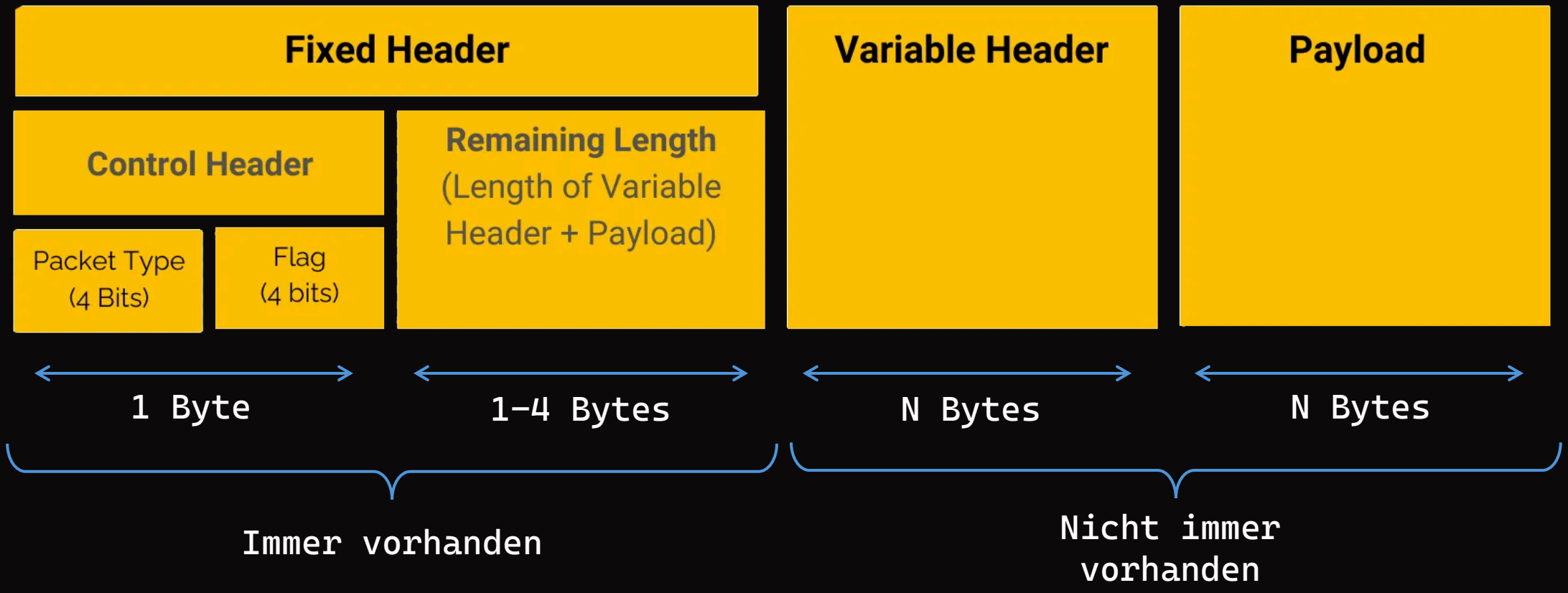
Vehicle/+/power → “1kw“, 150

Vehicle/# → Gibt alle Informationen über „Vehicle“ aus

Car


```
{
  "vehicle": {
    "battery": {
      "level": 80,
      "power": "1kw",
      "status": "charging"
    },
    "motor": {
      "power": 150,
      "torque": 300
    },
    "climate_control": {
      "temperature": 22,
      "mode": "auto"
    }
  }
}
```

Nachrichtenaufbau



IoT Anwendungsbereiche

- Smart Home → Beleuchtung, Thermostat…
- Smart Cities → Abfallmanagement

- Industrie → Maschinenkommunikation

- Lagerhaltung → Bestandsüberwachung

Beispiel

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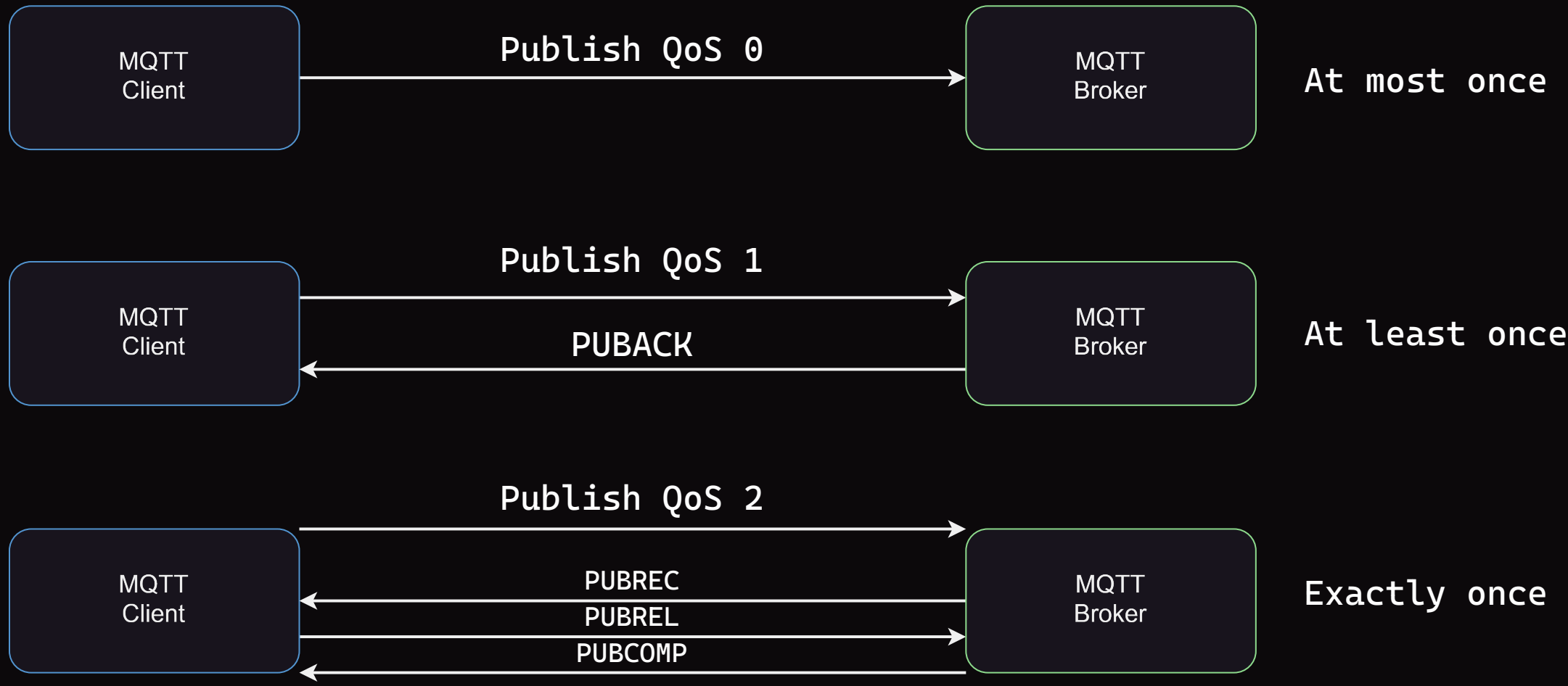
QoS – Quality of Service



Quellen

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