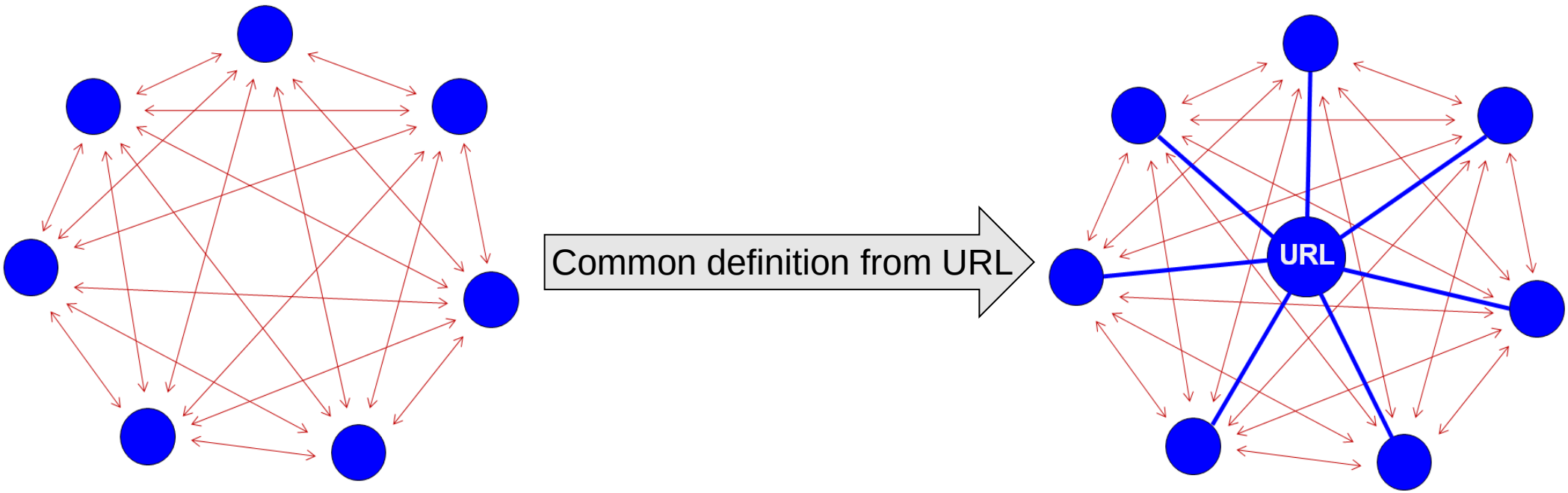
1. Information exchange

needs common definitions

(of exchanged numbers*)

today: from past + context,
future: additionally globally uniform via **URL**



URL = “Uniform Resource Locator” on the internet (used for globally unique definition)
the URL can be abbreviated e.g. using a short numeric pointer (e.g. to a local URL table)

* The term "numbers" has the same generality like "digital data", but better shows the structure.
Therefore this term or "number sequences" is used here for all kinds of digital information.

2. Foundation of Information

Information = **selection** from a set or **domain**.

Preconditions for precise transfer of information are:

(1) Well defined domain (for all participants of conversation)
(2) Ordered domain (so that its elements are selectable by numbers)
(3) Transfer of the numbers which show the selection in the domain

→ the new information carrier ("Domain Vector" resp. DV) has the form:

URL (of online definition) plus number sequence

- the online definition defines the domain of a selection (globally uniformly)
- the number sequence describes the selection in the domain

The domain is defined online (globally) and called "domain space" (DS).
According to **(2)**: The DS is a n-dimensional metric space whose elements are called "Domain vectors" (DVs).

The URL identifies the kind of numbers resp. data (like e.g. a file ending can identify the kind of data in the file)
The URL also is a pointer to the definition of the numbers

3. Digital information

The Domain Vector (DV):

URL (of definition) plus number sequence

- can represent every definable information - **precisely**
- from a **simple** word to **complex** multidimensional information
  e.g. in science, medicine, industry.
- **http://numericsearch.com** demonstrates searchability.
- DVs are internationally uniform and comparable for similarity search.
- The online definition can be **multilingual**,
- the meaning of DVs is **language independent** (if correctly defined)

Useful information is defined by **users.** The **users create** the search criteria.

- The URL locates the definition and can be abbreviated.
- Existing online definitions can be reused
(linked together and recombined) in new definitions.
- For search (and before providing data)
users can select DSs with the best (most meaningful) definitions.
This motivates to create better and better definitions.

4. User defined searchable information

The DV:

URL (of def.) plus number sequence

enables the combination:

- **maximal competence** **(definition by all internet users)**
- **maximal efficiency** **(number sequence)** (allows maximal entropy)

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