MSAMSum: Towards Benchmarking Multi-lingual Dialogue Summarization

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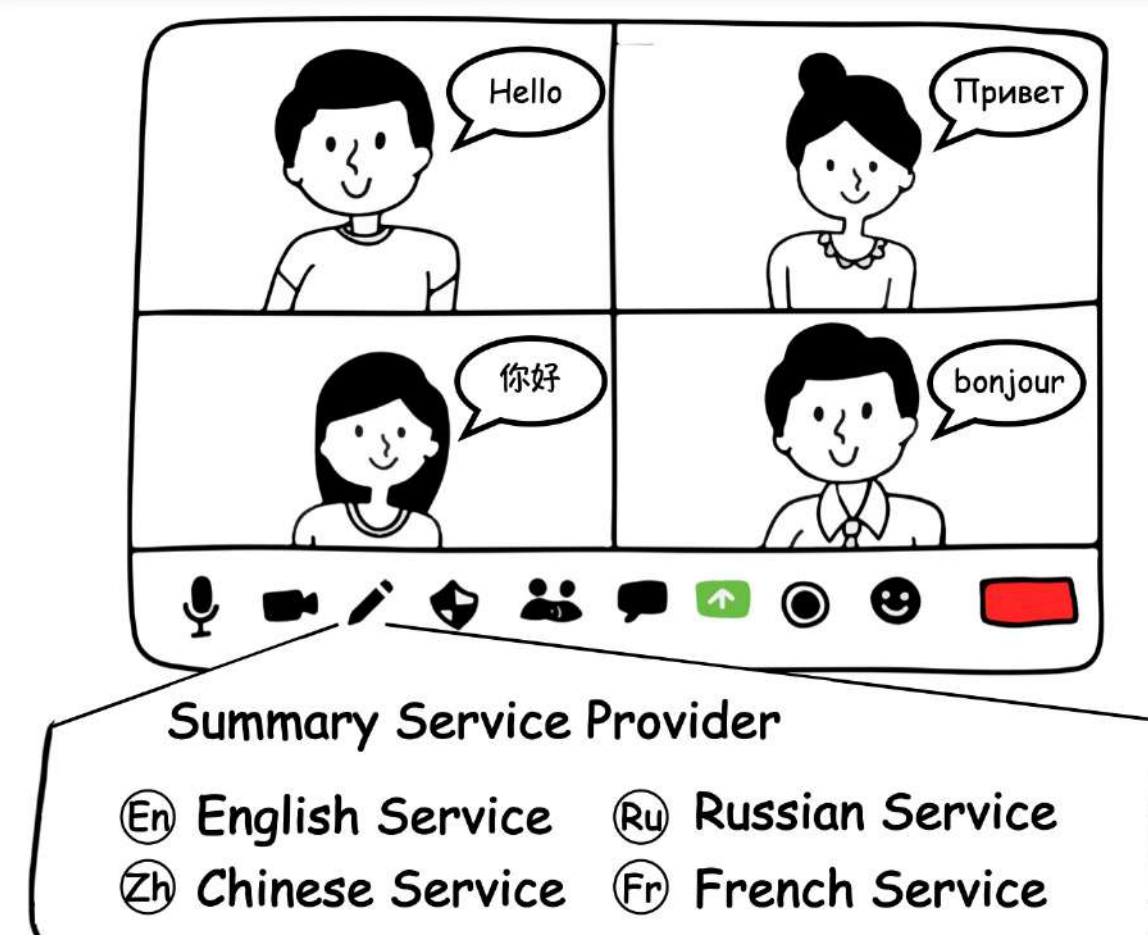
❖ Introduction

- **Dialogue Summarization**
  - Dialogue summarization helps users capture salient information from various types of dialogues has received much attention recently.
- **Problem**
  - Current works mainly focus on English dialogue summarization, leaving other languages less well explored.
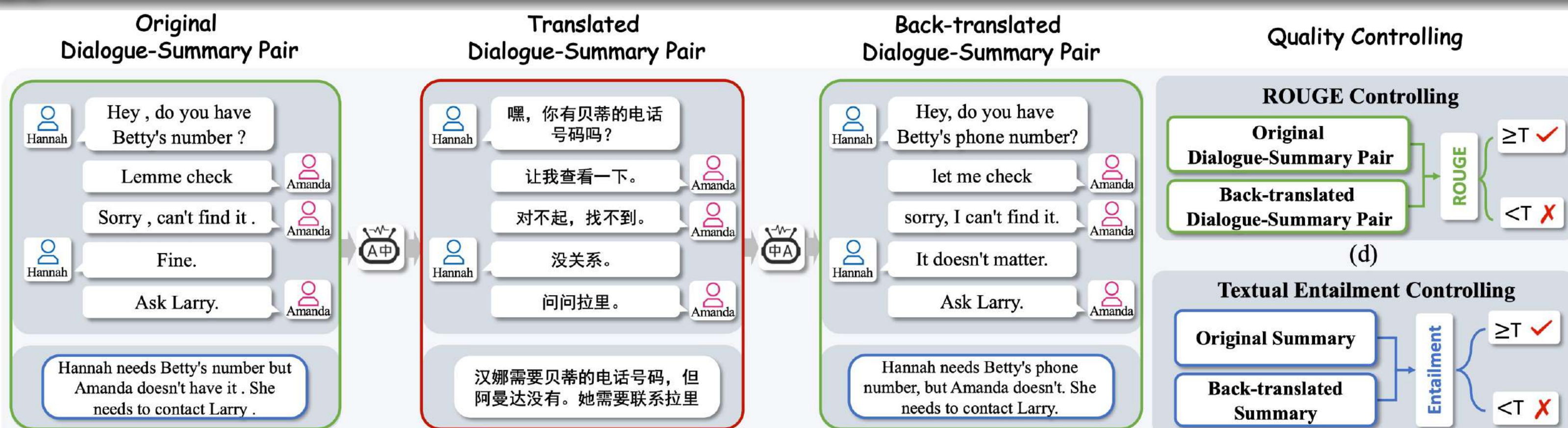- **Solution**
  - We propose a multi-lingual dialogue summarization task. We create MSAMSum, which covers dialogue-summary pairs in six languages. Furthermore, we set up five multi-lingual settings to benchmark extensive experiments.

Summary Service Provider
- En English Service
- Zh Chinese Service
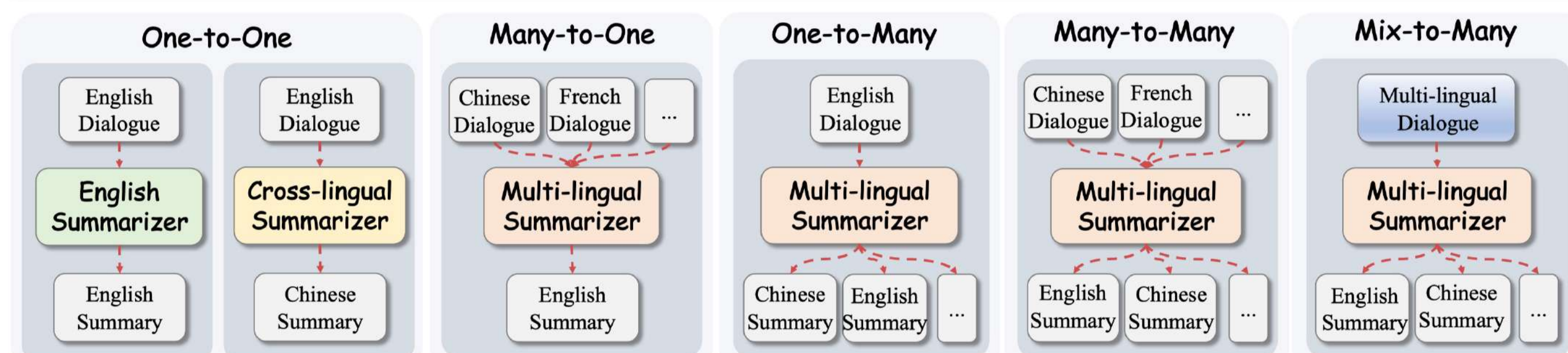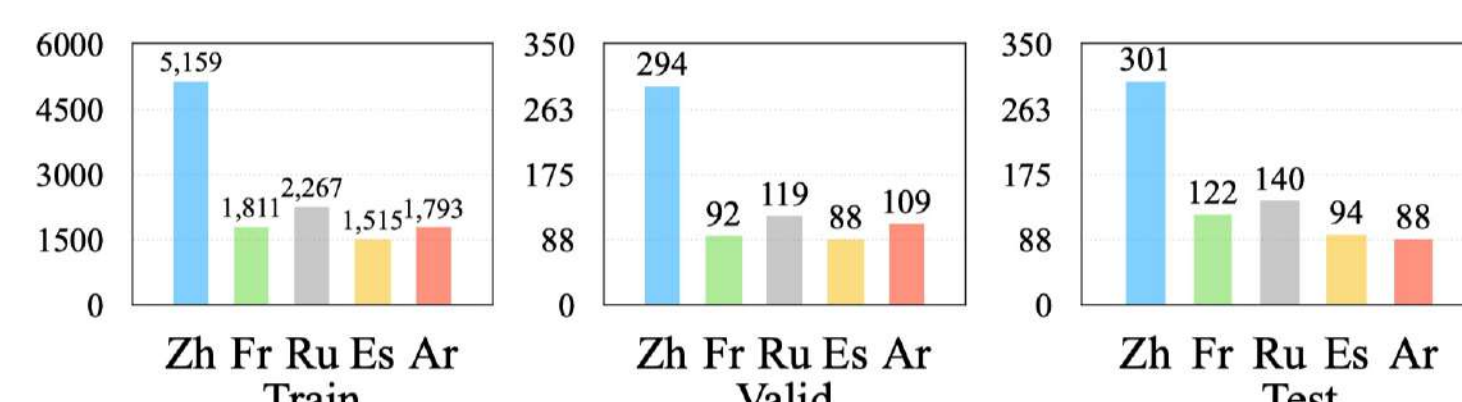- Ru Russian Service
- Fr French Service

❖ MSAMSum Dataset

- First, We select SAMSum as our source English dataset.
- Then, we translate it into five other official languages.
- Finally, we employ two methods: *round-trip translation* and *textual entailment* to filter out low-quality translations.
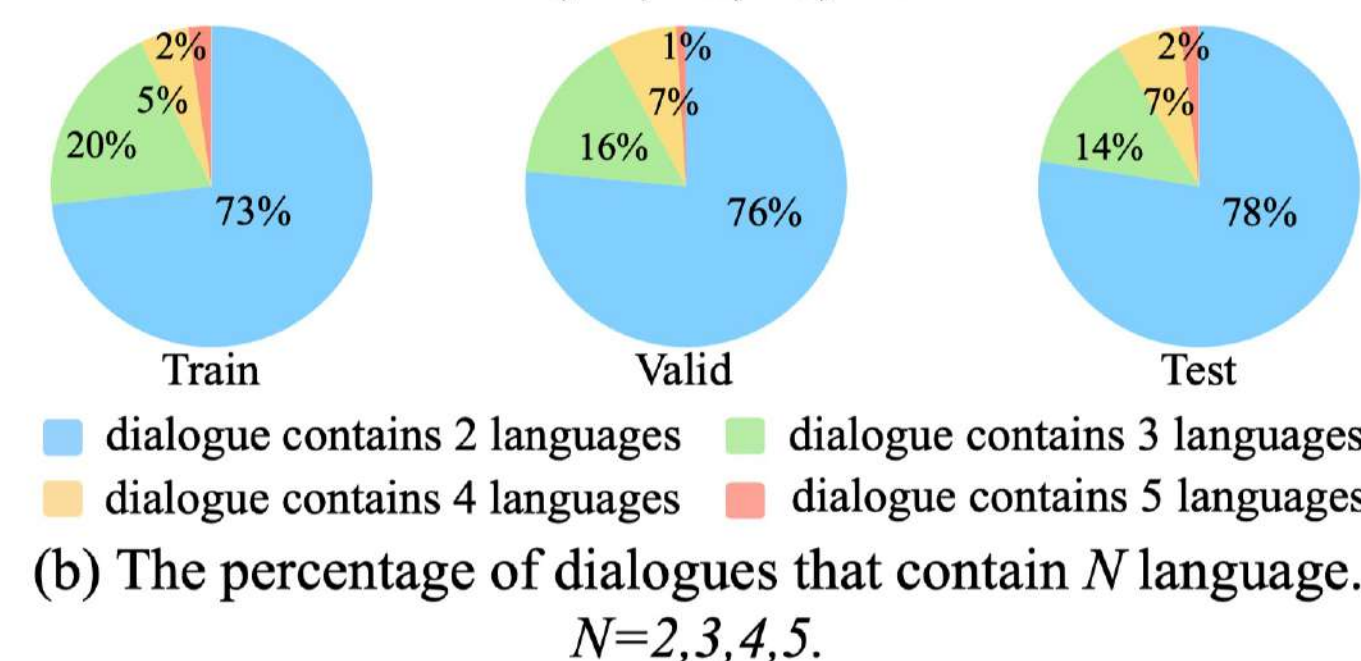

❖ Multi-lingual Settings

New ⭐Mix-to-Many Setting!

(a) The number of dialogues that contain L language, L=Zh, Fr, Ru, Es, Ar.

(b) The percentage of dialogues that contain N language. N=2,3,4,5.

- dialogue contains 2 languages
- dialogue contains 3 languages
- dialogue contains 4 languages
- dialogue contains 5 languages

❖ Experiments

ONE-TO-ONE

Src→Tgt	R-1	R-2	R-L
Mono-lingual			
En→En	49.16	24.18	40.15
Es→Es	43.95	20.01	35.87
Zh→Zh	40.11	16.93	33.48
Fr→Fr	41.77	19.20	34.47
Ru→Ru	37.95	15.74	31.76
Ar→Ar	28.66	6.61	23.07
Cross-lingual			
Zh→En	45.75	20.18	36.90
En→Zh	42.62	17.43	34.88

MANY-TO-ONE

Src→Tgt	R-1	R-2	R-L
En→En	48.18	22.43	38.63
Zh→En	45.01	17.76	35.49
Fr→En	44.22	18.49	35.30
Ar→En	31.09	08.00	24.18
Ru→En	44.20	17.53	35.06
Es→En	44.50	17.97	35.56

ONE-TO-MANY

Src→Tgt	R-1	R-2	R-L
En→En	49.84	24.73	40.67
En→Es	47.27	21.82	37.87
En→Zh	43.86	18.25	35.56
En→Fr	44.33	19.58	35.20
En→Ru	41.26	15.76	33.00
En→Ar	39.71	14.96	32.82

MIX-TO-MANY

Src→Tgt	R-1	R-2	R-L
Mix→En	44.68	17.78	35.17
Mix→Es	43.51	18.08	34.75
Mix→Zh	40.76	15.76	33.14
Mix→Fr	41.50	17.04	32.76
Mix→Ru	38.26	13.38	30.75
Mix→Ar	36.06	12.09	29.60

MANY-TO-MANY

Src→Tgt	En	Zh	Fr	Ar	Ru	Es
En	**48.00/22.29/36.79**	37.51/13.82/30.83	38.81/14.56/30.76	24.48/8.16/20.93	34.50/11.49/28.35	42.86/17.38/34.51
Zh	24.24/8.37/18.46	**43.75/19.14/35.56**	39.80/13.96/30.65	32.28/10.10/25.93	37.82/12.87/30.03	41.97/16.08/33.01
Fr	29.71/08.69/22.90	39.53/13.73/31.77	**45.26/21.60/36.25**	31.92/10.34/26.25	37.11/12.17/29.94	42.59/16.59/34.01
Ar	18.75/3.74/14.64	25.27/6.36/20.69	26.46/6.30/20.72	**29.15/7.76/23.47**	24.48/5.04/19.74	29.24/6.89/22.94
Ru	30.88/9.99/22.57	39.80/14.46/32.02	38.29/13.84/30.08	30.72/9.49/25.27	**41.50/15.95/33.28**	41.53/15.18/32.58
Es	37.18/12.14/27.74	39.79/15.05/32.09	41.04/15.91/31.97	31.41/10.18/25.75	37.34/12.02/30.11	**46.40/21.53/37.21**

Data

Paper