

Intent Classification

draft-irtf-nmrg-ibn-intent-classification-00

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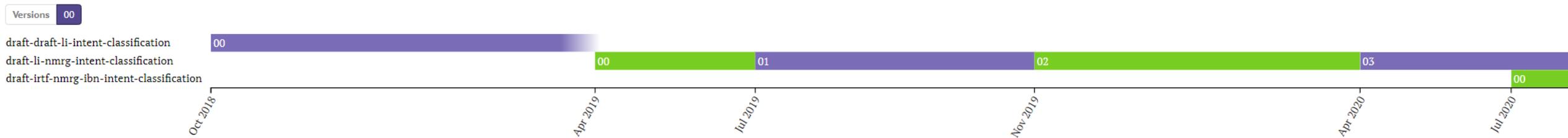
Brief Intro and Scope

- Goal of this draft is to bring clarity to **what an intent represents for different stakeholders**, by means of classification on various dimensions, such as solutions, users and intent types.
- This classification would ensure a **common understanding** across all participants and it can be used to identify the scope and priorities of individual projects, PoCs, research or open-source projects.
- This is achieved by proposing initial classification tables and the methodology used for generating them. This **methodology** can be used to update the tables by adding or removing different solutions, users or intent types in order to cater for future scenarios, applications or domains.
- This draft together with draft-irtf-nmrg-ibn-concepts-definitions aims to become the **foundation** for future intent-related topic discussions where all participants have the same common understanding

Summary

- Analysis of received comments
 - Classification based on complexity (0, 1, 2, 3), comments authors & sections
 - Assignment to Editors
- Draft Updates
 - Git project created for the draft (<https://github.com/irtf-nmrg/nmrg-ibn-intent-classification>)
 - V.00 to be added to git (Laurent is adding access rights)
 - V.01 created with 0 and 1 complexity addressed and will be added to git
 - Other updates in progress

History



RG Adoption:

- 1st July – Intent Classification draft adopted by the RG
- draft-irtf-nmrg-ibn-intent-classification-00 uploaded to IETF

Addressing Comments (draft-irtf-nmrg-ibn-intent-classification-01 in progress):

- 38 comments received since the RG adoption call
 - Mehdi Bezahaf (13)
 - Yehia Elkhatib (4)
 - Pedro Andres Aranda Gutierrez (5)
 - Allexander Clemm (4)
 - Qiong Sun (1)
 - King Daniel (11)

Received Comments Analyzed and Classified

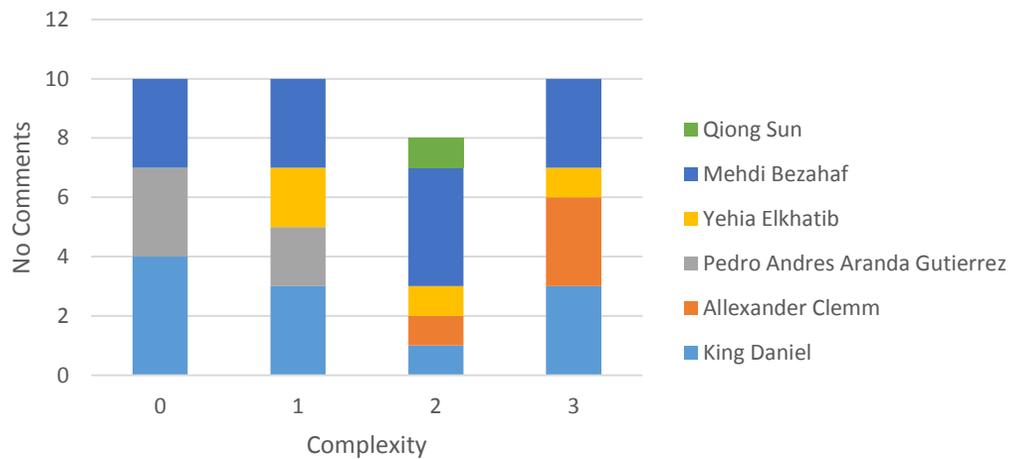
- Comments are split based on 4 complexity levels

- 0 = Lowest Complexity
- 3 = Highest Complexity

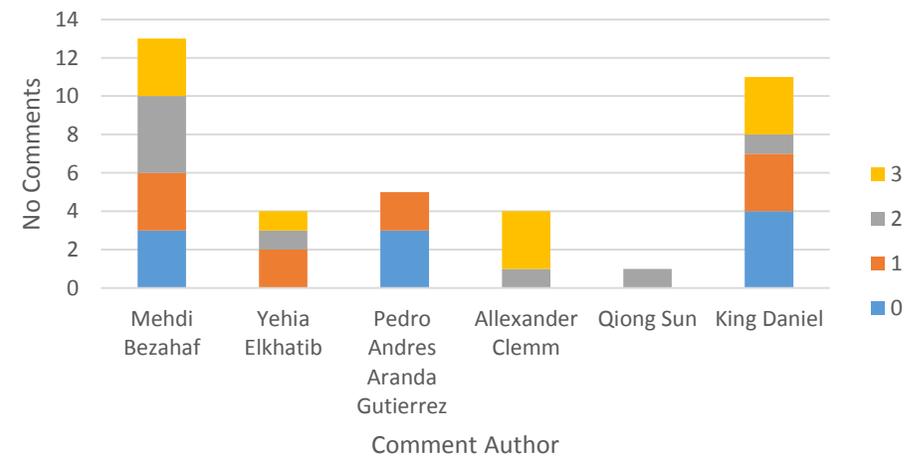
Overall Number of Comments	
Complexity	Total
Complexity 0	10
Complexity 1	10
Complexity 2	8
Complexity 3	10

Number of Comments per Author and per Complexity				
Author / Complexity	0	1	2	3
Mehdi Bezahaf	3	3	4	3
Yehia Elkhatib	0	2	1	1
Pedro Andres Aranda Gutierrez	3	2	0	0
Allexander Clemm	0	0	1	3
Qiong Sun	0	0	1	0
King Daniel	4	3	1	3

Author Distribution per Complexity



Complexity Distribution per Author



Updates (1) - Completed

	Author	Affiliation	High-level comment	Section	Complexity	Editor	Status	How it was addressed
1	Mehdi Bezahaf	Lancaster University	Consistent use of words.	ALL	0	Huawei	Completed	As per draft-nmrg-ibn-concepts-definitions, we can use the following: life-cycle, end-users. For the rest: intent-driven (as per SLA-driven in draft), task-based.
2	Mehdi Bezahaf	Lancaster University	Missing acronyms.	2	0	Huawei	Completed	Updated the list in section 2.
3	Mehdi Bezahaf	Lancaster University	Clarify intent vs. policy confusion.	3	1	Huawei	Completed	Updated as suggested by Yehia " An intent is mistaken by many to be just a synonym for policy. While it is easier for those familiar with different standards to understand what service, CFS, RFS, resource, policy continuum, ECA policy, declarative policy, abstract policy or intent policy is, it may be more difficult for the wider audience. Furthermore, those familiar with policies understand the difference between a business, intent, declarative, imperative, and ECA policy."
4	Mehdi Bezahaf	Lancaster University	The authors sees the listed intent solutions more as scenarios or contexts	3	1	Huawei	Completed	This has been addressed through email
5	Mehdi Bezahaf	Lancaster University	Clarify whether intent solutions and intents users are covering all possibilities or are just examples/starting point.	3	1	Huawei	Completed	The following sentence has been added after the table: "These intent solutions and intent users represent a starting point for the classification and are expendable through the methodology presented in Section 5.1."
11	Mehdi Bezahaf	Lancaster University	Duplicate entries in the table	5	0	Huawei	Completed	Fixed 5.3.1 table. Removed two entries.
14	Yehia Elkhatib	Lancaster University	Clarify intent vs. policy confusion.	3	1	Huawei	Completed	Updated as suggested by Yehia " An intent is mistaken by many to be just a synonym for policy. While it is easier for those familiar with different standards to understand what service, CFS, RFS, resource, policy continuum, ECA policy, declarative policy, abstract policy or intent policy is, it may be more difficult for the wider audience. Furthermore, those familiar with policies understand the difference between a business, intent, declarative, imperative, and ECA policy."
17	Yehia Elkhatib	Lancaster University	Clarify that the presented intent scopes are extendable.	4	1	Huawei	Completed	The following sentence has been added at the end of Section 4.3 "These intent scopes are expendable through the methodology presented in Section 5.1."
18	Aranda Gutierrez	Paderborn University	Verify the distinction between SDOs and non-SDOs solutions.	1	0	Huawei	Completed	Rewritten as "All SDOs, and open source projects, such as IETF [ANIMA]..."
19	Pedro Andres Aranda Gutierrez	Paderborn University	Re-phrasing of text - "Thus, the goal of this document is to bring clarity to what an intent represents for different stakeholders...."	1	1	Huawei	Completed	Updated as suggested "The goal of this document is to clarify what an intent represents for different stakeholders"
20	Aranda Gutierrez	Paderborn University	Re-phrasing of text: Review usage of would/could or will/can	1	1	Huawei	Completed	"This classification could"
21	Pedro Andres Aranda Gutierrez	Paderborn University	Re-phrasing of text: Specify the important part of the sentence first: ""This is achieved by proposing initial classification tables and the methodology used for generating them."	1	0	Huawei	Completed	Rephrased as "This is achieved by proposing the methodology and initial classification tables"
22	Aranda Gutierrez	Paderborn University	Re-phrasing of text: "This draft together with [CLEMM] aims"	1	0	Huawei	Completed	Together with CLEMM, this draft aims...
28	King Daniel	Lancaster UK	Re-phrasing of text: Paragraph 2	Abstract	1	Huawei	Completed	Updated as suggested: "This document discusses the concept of intent. Specifically, it highlights stakeholder perspectives of intent, methods to classify and encode intent, the associated intent taxonomy, and defines relevant intent terms where necessary. This document provides a foundation for intent related research and facilitate solution development."
30	King Daniel	Lancaster UK	Section 3 and 6 titles should use capitalised letters for consistency.	TOC	0	Huawei	Completed	Capitalized in TOC and Section Name Section 3: Abstract Intent Requirements Section 6: Involvement of Intent in the Application of AI to Network Management
31	King Daniel	Lancaster UK	Missing acronyms.	1	0	Huawei	Completed	Updated the list in section 2.
32	King Daniel	Lancaster UK	Consistent use of words.	ALL	0	Huawei	Completed	As per draft-nmrg-ibn-concepts-definitions, we can use the following: life-cycle, end-users. For the rest: intent-driven (as per SLA-driven in draft), task-based.
33	King Daniel	Lancaster UK	Re-phrasing of text: Paragraph 4	1	1	Huawei	Completed	Updated as: "As it can be observed, each of the aforementioned SDOs came up with their own way of specifying an intent, and with their own understanding of what an Intent is. Each SDO defines a set of terms and level of abstraction, its intended users, and the applications and usage scenarios."
36	King Daniel	Lancaster UK	Create Key Words section after Introduction.	1	0	Huawei	Completed	Separated the text "The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in RFC 2119 [RFC2119]." in a new section after Introduction.

Most comments of complexity 0 and 1 addressed

- 19 in total
- 1 outstanding (in progress by Huawei)

Updates (2) - Assigned

- China Telecom

	Author	Affiliation	High-level comment	Section	Complexity	Editor	Status
10	Mehdi Bezahaf	Lancaster University	Consistency between intent user types throughout the document.	5	2	China Telecom	
12	Mehdi Bezahaf	Lancaster University	Consistency between intent types throughout the document.	5	2	China Telecom	
13	Mehdi Bezahaf	Lancaster University	AI is out of scope for intent classification topic.	6	3	China Telecom	
15	Yehia Elkhatib	Lancaster University	Provide more details on some of the intents, such as how the intent would manifest for an operational point of view.	5	3	China Telecom	
27	Qiong Sun	China Telecom	Role of AI in section 6 needs more explanation.	6	2	China Telecom	

- Prof. Dr. Jéferson Campos Nobre

	Author	Affiliation	High-level comment	Section	Complexity	Editor	Status
16	Yehia Elkhatib	Lancaster University	Clarify the aspect of intent conflict resolution.	1	2	Jeferson	
34	King Daniel	Lancaster UK	Create sub-section 1.1 Scope within the Introduction section.	1	3	Jeferson	
35	King Daniel	Lancaster UK	List SDOs scope of work and their output, in order to identify gaps.	1	3	Jeferson	
37	King Daniel	Lancaster UK	Include a Definitions section, along the Acronyms one.	1	3	Jeferson	

Updates (3) - Assigned

- Pedro Martinez-Julia

	Author	Affiliation	High-level comment	Section	Complexity	Editor	Status
6	Mehdi Bezahaf	Lancaster University	User type and context alone does not define the intent type.	3	3	Pedro	
7	Mehdi Bezahaf	Lancaster University	Section 3.1 and 3.2 are related. Picking actor, context and use-case presents a clear definition of an intent.	3	2	Pedro	
8	Mehdi Bezahaf	Lancaster University	Title of section 3.3 title mentioning "problems" could be replaced with "benefits" or "improvements"	3	2	Pedro	

- Huawei

	Author	Affiliation	High-level comment	Section	Complexity	Editor	Status
9	Mehdi Bezahaf	Lancaster University	Methodology picture is confusing and needs extended description on some of the entities.	5	3	Huawei	
29	King Daniel	Lancaster UK	Update Introduction and Abstract should mention the focus is on "network intent"	Abstract	1	Huawei	

Currently in Progress by Pedro Martinez-Julia and Huawei

Updates (4) – to be assigned

	Author	Affiliation	High-level comment	Section	Complexity	Editor	Status
23	Alexander Clemm	Futurewei	Referencing of CLEMMs draft and our position in relation to the draft.	ALL	2	??	
24	Alexander Clemm	Futurewei	Unclear what is the purpose of the Classification Tables. Provide clarification on their usage.	5	3	??	
25	Alexander Clemm	Futurewei	Discussion on how classification might be extended/adjusted as technologies evolve.	5	3	??	
26	Alexander Clemm	Futurewei	Discussion on whether low-level intents should be included or excluded. Decision should be made after deliberation.	4	3	??	
38	King Daniel	Lancaster UK	Fix english nits and improve readability.	ALL	2	??	

Not assigned yet, China Telecom and Huawei will address if not other volunteers

Conclusion and Next Steps

- Currently, complexity 0 and 1 comments are addressed.
- Candidate editors identified for most of the comments.
- Next steps:
 - Assign the rest of the comments
 - Continue addressing the comments for v01 of the document
 - Engage with comment authors as needed
 - Submit v01 of the document

Thank You

Received Comments (1)

	Author	Affiliation	High-level comment	Section	Completed	Candidate Editor	Status
1	Mehdi Bezahaf	Lancaster University	Consistent use of words.	ALL	0	Huawei	Completed
2	Mehdi Bezahaf	Lancaster University	Missing acronyms.	2	0	Huawei	Completed
3	Mehdi Bezahaf	Lancaster University	Clarify intent vs. policy confusion.	3	1	Huawei	Completed
4	Mehdi Bezahaf	Lancaster University	The authors sees the listed intent solutions more as scenarios or contexts	3	1	Huawei	Completed
5	Mehdi Bezahaf	Lancaster University	Clarify whether intent solutions and intents users are covering all possibilities or are just examples/starting point.	3	1	Huawei	Completed
6	Mehdi Bezahaf	Lancaster University	User type and context alone does not define the intent type.	3	3	??	
7	Mehdi Bezahaf	Lancaster University	Section 3.1 and 3.2 are related. Picking actor, context and use-case presents a clear definition of an intent	3	2	??	
8	Mehdi Bezahaf	Lancaster University	Title of section 3.3 title mentioning "problems" could be replaced with "benefits" or "improvements"	3	2	??	
9	Mehdi Bezahaf	Lancaster University	Methodology picture is confusing and needs extended description on some of the entities.	5	3	Huawei	Huawei
10	Mehdi Bezahaf	Lancaster University	Consistency between intent user types throughout the document.	5	2	China Telecom	
11	Mehdi Bezahaf	Lancaster University	Duplicat entries in the table	5	0	Huawei	Completed
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14	Yehia Elkhatib	Lancaster University	Clarify intent vs. policy confusion.	3	1	Huawei	Completed
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16	Yehia Elkhatib	Lancaster University	Clarify the aspect of intent conflict resolution.	1	2	Jeferson	
17	Yehia Elkhatib	Lancaster University	Clarify that the presented intent scopes are extendable.	4	1	Huawei	Completed
18	Pedro Andres Aranda Gutierrez	Paderborn University	Verify the distinction between SDOs and non-SDOs solutions.	1	0	Huawei	Completed
19	Pedro Andres Aranda Gutierrez	Paderborn University	Re-phrasing of text - "Thus, the goal of this document is to bring clarity to what an intent represents for different stakeholders,..."	1	1	Huawei	Completed
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25	Alexander Clemm	Futurewei	Discussion on how classification might be extended/adjusted as technologies evolve.	5	3	??	
26	Alexander Clemm	Futurewei	Discussion on whether low-level intents should be included or excluded. Decision should be made after deliberation.	4	3	??	
27	Qiong Sun	China Telecom	Role of AI in section 6 needs more explanation.	6	2	China Telecom	

Received Comments (4)

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28	King Daniel	Lancaster UK	Re-phrasing of text: Paragraph 2	Abstract	1	Huawei	Completed
29	King Daniel	Lancaster UK	Update Introduction and Abstract should mention the focus is on "network intent"	Abstract	1	Huawei	
30	King Daniel	Lancaster UK	Section 3 and 6 titles should use capitalised letters for consistency.	TOC	0	Huawei	Completed
31	King Daniel	Lancaster UK	Missing acronyms.	1	0	Huawei	Completed
32	King Daniel	Lancaster UK	Consistent use of words.	ALL	0	Huawei	Completed
33	King Daniel	Lancaster UK	Re-phrasing of text: Paragraph 4	1	1	Huawei	Completed
34	King Daniel	Lancaster UK	Create sub-section 1.1 Scope within the Introduction section.	1	3	Jeferson	
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36	King Daniel	Lancaster UK	Create Key Words section after Introduction.	1	0	Huawei	Completed
37	King Daniel	Lancaster UK	Include a Definitions section, along the Acronyms one.	1	3	Jeferson	
38	King Daniel	Lancaster UK	Fix english nits and improve readability.	ALL	2	??	

Updates (1)

- All Complexity 0 and Complexity 1 comments have been addressed by Huawei

ID	Author	Affiliation	High-level comment	Section	Complexity	Candidate Editor	Completed (YES/NO)	How was it addressed
1	Mehdi Bezahaf	Lancaster University	Consistent use of words.	ALL	0	Huawei	YES	As per draft-nmrg-ibn-concepts-definitions, we can use the following: life-cycle, end-users.
2	Mehdi Bezahaf	Lancaster University	Missing acronyms.	2	0	Huawei	YES	For the rest: intent-driven (as per SLA-driven in draft), task-based. Updated the list in section 2.
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22	Pedro Andres Aranda Gutierrez	Paderborn University	Re-phrasing of text: "This draft together with [CLEMM] aims"	1	0	Huawei	YES	Together with CLEMM, this draft aims...
		Lancaster UK	Re-phrasing of text: Paragraph 2	Abstract	1	Huawei	YES	Updated as suggested: "This document discusses the concept of intent. Specifically, it highlights stakeholder perspectives of intent, methods to classify and encode intent, the associated intent taxonomy, and defines